

**Final Environmental Impact Statement  
and  
*National Historic Preservation Act*  
Section 106 Consultation:  
Reconfiguration of VA Black Hills Health  
Care System**



**U.S. Department of Veterans Affairs  
Black Hills Health Care System**



**November 2016**

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## PREFACE

### What is NEPA and How Does it Apply to Federal Actions?

- Under the *National Environmental Policy Act* (NEPA), federal agencies must comply with the procedural requirements of NEPA before they make final decisions about major federal actions that could have effects on the human environment. For purposes of NEPA, “effects” and “impacts” mean the same thing. They include ecological, aesthetic, historic, cultural, economic, social, or health impacts, whether adverse or beneficial and whether direct, indirect, or cumulative. “Human environment” includes the natural and physical environment and the relationship of people with that environment.
- NEPA’s procedural requirements pertain to a federal agency’s projects, programs, plans, policies, and proposals. NEPA applies when a federal agency has discretion to choose among one or more alternative means of accomplishing a particular goal.
- NEPA requires federal agencies to consider environmental effects in their decision making. It does not require the decision maker to select the environmentally preferable alternative or prohibit adverse environmental effects. Decision makers in federal agencies often have other concerns and policy considerations to take into account in the decision-making process, such as social, economic, health, or national security interests. However, NEPA does require that decision makers be informed of the environmental consequences of their decisions.
- A federal agency must prepare an environmental impact statement (EIS) if it is proposing a “major federal action significantly affecting the quality of the human environment”.
- One key aspect of an EIS is the statement of the underlying purpose (objectives) and need (reasons) for the proposed action. Agencies draft a “Purpose and Need” statement to describe what they are trying to achieve by proposing an action. The purpose and need statement explains to the reader why an agency action is necessary, and serves as the basis for identifying a reasonable range of alternatives that meet the purpose and need.
- The identification and evaluation of alternative ways of meeting the purpose and need of the proposed action is the heart of the NEPA analysis. The agency objectively evaluates all reasonable alternatives, and for alternatives that were eliminated from detailed study, briefly discusses the reasons for their having been eliminated.
- Reasonable alternatives include those that are practical or feasible from a technical and economic standpoint and using common sense, rather than simply desirable. Agencies must evaluate all reasonable alternatives in enough detail so that a reader can compare and contrast the environmental effects of the various alternatives.
- The record of decision is the final step in the EIS process. This document states what the decision is; identifies the alternatives considered, including the environmentally preferable alternative; and discusses mitigation plans, including any enforcement and monitoring commitments.

From *A Citizen’s Guide to the NEPA*, Council on Environmental Quality, 2007.

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## ABSTRACT

**LEAD AGENCY:** U.S. Department of Veterans Affairs (VA), Black Hills Health Care System (BHHCS)

**COOPERATING AGENCIES:** None

**TITLE OF PROPOSAL:** Reconfiguration of VA Black Hills Health Care System

**AFFECTED JURISDICTION:** Western South Dakota, northwestern Nebraska, eastern Wyoming

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**PROPONENT:** VA BHHCS

**DOCUMENT DESIGNATION:** Final Environmental Impact Statement (EIS) and *National Historic Preservation Act* Section 106 Consultation

VA proposes to reconfigure health care services throughout the VA BHHCS catchment area to enhance and maintain the quality and safety of care for Veterans. This Final EIS analyzes a total of seven alternatives for changes to VA's facilities in Hot Springs and Rapid City, South Dakota plus a supplemental alternative that can be implemented alongside four of the alternatives to support the proposed services reconfiguration.

Alternatives A (including A-1 and a new A-2 hybrid alternative identified in the Final EIS) through D involve the addition of purchased care from community providers and varying combinations of new construction or leases in Hot Springs and Rapid City, and renovations to or vacating the Hot Springs VA Campus. Alternative E is a proposal developed by Save the VA, a local community organization, for expanded VA health care services at the Hot Springs Campus. Alternative F is the No Action alternative, which is required by the *National Environmental Policy Act* (NEPA) and its regulations and also provides a baseline for comparing potential impacts from the action alternatives. Supplemental Alternative G, repurposing all or part of the existing Hot Springs Campus, could be implemented in concert with Alternatives A-1 and A-2 through D.

VA BHHCS's preferred alternative is the new hybrid Alternative A-2, which would construct a multi-specialty outpatient clinic (MSOC) and 100-bed residential rehabilitation treatment program (RRTP) facility in Rapid City, renovate Building 12 for a community-based outpatient clinic (CBOC) on the Hot Springs Campus, discontinue other services at the Hot Springs Campus—which includes the Battle Mountain Sanitarium, a National Historic Landmark—and identify and approve appropriate re-use of the remainder of the Hot Springs Campus under Supplemental Alternative G.

The analysis uses the substitution procedures defined in the regulations for implementing Section 106 of the *National Historic Preservation Act*, by which agencies can substitute the NEPA process for effects analysis and consultation under Section 106, by developing an integrated NEPA analysis. Consultation and identification and resolution of effects to historic properties are documented throughout this EIS.

The EIS describes mitigation measures for the potential impacts to environmental resources that are identified in the analysis. Unavoidable adverse impacts include effects to air quality, cultural resources and historic properties, noise, socioeconomics, solid waste and hazardous materials, utilities, and transportation and traffic. With the exception of socioeconomics, mitigation measures would substantially decrease the magnitude of these impacts. The measures to resolve adverse effects to historic properties identified in the Final EIS for each of the alternatives were developed in consultation with the historic properties consulting parties.

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## ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
ADT	average daily traffic
APE	area of potential effects
AST	aboveground storage tank
BHHCS	Black Hills Health Care System
Btu	British thermal unit
CBOC	community-based outpatient clinic
CEQ	Council on Environmental Quality
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act</i>
CESQG	conditionally exempt small-quantity generator
CFM	VA's Office of Construction & Facilities Management
CFR	Code of Federal Regulations
CLC	community living center
CRGRID	Cultural Resource Geographic Research Information Display
CT	computerized tomography
CWT	compensated work therapy
DAV	Disabled American Veterans (organization)
dB	decibel
dBA	A-weighted decibel
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
EUL	enhanced-use lease
FD	fire department
FEMA	Federal Emergency Management Agency
FIRM	flood insurance rate map
ft	foot, feet
ft <sup>2</sup>	square feet
ft <sup>3</sup>	cubic feet
FTEE	full-time equivalent employee
FWS	U.S. Fish and Wildlife Service
FY	fiscal year
gpd	gallons per day
GSF	gross square feet
HAP	hazardous air pollutant
IHS	Indian Health Service

L <sub>10</sub> , L <sub>50</sub> , L <sub>90</sub>	sound level at 10 <sup>th</sup> , 50 <sup>th</sup> , 90 <sup>th</sup> percentile
LEED	Leadership in Energy and Environmental Design
L <sub>eq</sub>	equivalent sound level
L <sub>max</sub> , L <sub>min</sub>	maximum or minimum sound level
MPO	Rapid City Area Metropolitan Planning Organization
MRI	magnetic resonance imaging
MSOC	multi-specialty outpatient clinic
NAAQS	National Ambient Air Quality Standards
NE	Nebraska
NEPA	<i>National Environmental Policy Act</i>
NHDVS	National Homes for Disabled Volunteer Soldiers
NHL	national historic landmark
NHPA	<i>National Historic Preservation Act</i>
NOA	notice of availability
NOI	notice of intent
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
NSR	new source review
NWI	National Wetlands Inventory
PCBs	polychlorinated biphenyls
PD	police department
PM	particulate matter
PM <sub>10</sub>	particulate matter less than 10 micrometers in diameter
PTSD	post-traumatic stress disorder
RCRA	<i>Resource Conservation and Recovery Act</i>
ROD	record of decision
RRTP	residential rehabilitation treatment program
SD	South Dakota
SDCL	South Dakota Codified Laws
SDDENR	South Dakota Department of Environment and Natural Resources
SDDFG	South Dakota Department of Fish and Game
SHPO	State Historic Preservation Officer
SSPP	strategic sustainability performance plans
U.S.	United States
U.S.C.	United States Code
USACE	U.S. Army Corps of Engineers

UST	underground storage tank
VA	U.S. Department of Veterans Affairs
VAMC	VA Medical Center
VFD	volunteer fire department
VHA	Veterans Health Administration
VISN	Veterans Integrated Service Network
WY	Wyoming



## EXECUTIVE SUMMARY

As required by the *National Environmental Policy Act* (NEPA), the U.S. Department of Veterans Affairs (VA) identifies, analyzes, and documents the potential physical, environmental, cultural, and socioeconomic impacts associated with the proposed reconfiguration of health care services within the Black Hills Health Care System (BHHCS) in this environmental impact statement (EIS). VA BHHCS provides health care to approximately 19,000 Veterans over 100,000 square miles in western South Dakota, northwestern Nebraska, and eastern Wyoming.

This EIS integrates NEPA review of the proposal with requirements for consultation on effects to historic properties under Section 106 of the *National Historic Preservation Act*. This integrated process complies with the regulations of 36 CFR §800.8 and the Advisory Council on Historic Preservation’s “Procedures for the Protection of Historic Properties” as well as published federal guidance for substituting the NEPA process for Section 106 review.

The ***purpose*** of VA’s proposal to reconfigure health care services in the BHHCS is to provide high-quality, safe, and accessible health care for Veterans well into the twenty-first century by:

- Providing locations and facilities that support VA’s efforts to enhance and maintain quality and safety of care in the 100,000-square-mile catchment area
- Ensuring facilities for Veterans receiving any services comply with accessibility requirements for handicapped individuals, support current standards of care, and can be well-maintained within available budgets and resources
- Increasing access to care closer to where Veterans reside
- Reducing out-of-pocket expenses for Veterans’ travel

VA has identified a ***need*** to reconfigure health care services in the BHHCS catchment area because:

- VA has difficulty maintaining high-quality, safe, and accessible care at the Hot Springs Campus.
- Existing locations and facilities constrain the quality of care, range of services, and access to care VA offers to Veterans in the catchment area.

Decisions regarding appropriate physical buildings and infrastructure required to provide the proposed reconfiguration of services are the focus of this EIS and the NEPA process. **It is not within the scope of this EIS to determine the specific health care services that VA offers to Veterans at any location.** These are decisions made by the Veterans Health Administration’s leaders, planners, and health care practitioners to further the mission to “Honor America’s Veterans by providing exceptional health care that improves their health and well-being.” **This EIS analyzes impacts from the alternatives for the physical facilities from which health care services are offered within the VA BHHCS catchment area.**

Six alternatives, including two variations on one alternative (one of which is the preferred alternative) are considered in detail in this EIS, as well as a supplement to four of the alternatives. These result in a total of 12 possible courses of action. The alternatives propose different locations and combinations of facilities serving as a community-based outpatient clinic (CBOC), a multi-

specialty outpatient clinic (MSOC), and a residential rehabilitation treatment program (RRTP) facility; expanding, renovating, or vacating existing facilities; and taking no action:

- A. A-1. Hot Springs: new CBOC, cease services at existing VA campus  
Rapid City: new MSOC (replacing leased CBOC) and 100-bed RRTP
- A-2. Hot Springs: CBOC within Building 12 on existing VA campus  
Rapid City: new MSOC (replacing leased CBOC) and 100-bed RRTP
- B. Hot Springs: new CBOC and 100-bed RRTP, cease services at existing VA campus  
Rapid City: new MSOC (replacing leased CBOC)
- C. Hot Springs: renovations for new CBOC in Building 12 and 100-bed RRTP in domiciliary at existing VA campus  
Rapid City: new MSOC (replacing leased CBOC)
- D. Hot Springs: new CBOC and 24-bed RRTP, cease services at existing VA campus  
Rapid City: new MSOC (replacing leased CBOC) and 76-bed RRTP
- E. Save the VA Proposal  
Hot Springs: renovations and construction to continue and expand inpatient and outpatient services at existing VA campus, including a 200-bed RRTP (160 in existing domiciliary)  
Rapid City: new MSOC (replacing leased CBOC)
- F. No Action
- G. Supplemental alternative to A, B, C, or D for re-use of part or all of existing Hot Springs Campus

Alternative A-2 is VA's preferred alternative.

The following table summarizes the potential environmental impacts of the alternatives.

**Table: Summary of Impact Analysis**

Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
Meets purpose of and need for action	Yes	Yes	No	No	Yes	No	No	Not applicable
Estimated 30-year cost (new construction)	\$148,622,461	\$217,103,464	\$168,234,767	\$229,838,861	\$176,040,980	\$217,036,697 [+\$additional 48,409,410 now added in for Rapid City MSOC]	\$215,082,431	Would vary based on use
Aesthetics	Presence of construction equipment could temporarily obstruct views, affect visual quality, and cause nighttime light trespass. VA facilities could permanently change visual appearance of site; create noticeable contrast to surrounding views; and cause nighttime illumination, glare, or light trespass.		Similar to Alternative A, with impacts slightly less for Rapid City due to smaller facility footprint.	No impacts to visual quality of VA Hot Springs Campus during construction. Construction and operation impacts for Rapid City similar to Alternative B.	Similar to Alternative A, with impacts slightly more for Hot Springs and slightly less for Rapid City.	Similar impacts to Alternative A, but would occur on VA Hot Springs Campus.	Similar to Alternative C for VA Hot Springs Campus; no impacts for Rapid City CBOC.	Similar to Alternative E.

Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
Air Quality	<p>Construction and operation emissions would comply with all permit requirements and regulations, ensuring negligible impacts. Particulate emissions during construction would be below the <i>de minimis</i> threshold level. Decreased mobile source emissions due to improved geographic access to care.</p> <p>A-2: less short-term emissions from construction than Alternative A-1 since no new construction of CBOC in Hot Springs.</p> <p>Greenhouse gas emissions expected to be negligible from construction; emissions from operation not expected to result in adverse regional impacts from climate change.</p>		Similar to Alternative A.	Impacts similar to but less than those from Alternative B. Less short-term emissions from construction than Alternative A or B.	Constructing and operating two RRTPs would result in increased emissions compared to Alternatives A and B, but impacts would otherwise be similar. Compliance with all permit requirements and regulations would ensure negligible impacts.	Short-term minor impacts during construction on the Hot Springs Campus. Operations impact similar to or slightly greater than Alternative F, with all existing facilities plus new building(s) on the Hot Springs Campus. Compliance with all permit requirements and regulations would ensure negligible	No or minimal construction impacts due to mostly interior renovations as budget allows. Ongoing operational emissions continue at current levels; continued regulatory and permit compliance would ensure negligible impacts.	Construction and operation impacts similar to Alternatives C, E, or F, depending on the extent of renovation or construction and the nature and intensity of activities from specific re-use.

Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
						impacts.		
Cultural Resources and Historic Properties	<p><u>On-campus (A-1 and B):</u> Change in use of VA Hot Springs campus would diminish historic character of National Historic Landmark and affect setting and association of Historic District.</p> <p><u>On-campus (A-2):</u> Similar to Alternative A, except change in use of only some campus buildings and no effect to historic setting. Exterior and interior renovations could alter historic features.</p> <p><u>Off-campus:</u> Ground disturbance could encounter and remove archaeological and cultural materials. Construction introduces audible and visual elements to historic setting. Could affect the Hot Springs Historic District.</p>		<p><u>On-campus:</u> Similar to Alternative A-2.</p> <p><u>Off-campus:</u> Similar to Alternative A, except affects only Rapid City.</p>	<p><u>On-campus:</u> Similar to Alternative A-1.</p> <p><u>Off-campus:</u> similar to Alternative A-1.</p>	<p><u>On-campus:</u> Exterior and interior renovations, new construction could alter historic features. Ground disturbance could encounter archaeological and cultural materials. Construction introduces audible and visual elements to historic setting.</p> <p><u>Off-campus:</u></p>	<p><u>On-campus:</u> Actions to maintain or upgrade campus buildings could alter historic features.</p> <p><u>Off campus:</u> None.</p>	<p><u>On-campus:</u> Similar to Alternative E. Change in use of campus would diminish historic character of National Historic Landmark.</p> <p><u>Off-campus:</u> Similar to Alternative E.</p>	

Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
						Potential viewshed concerns for Hot Springs Historic District		
Geology and Soils	Minor and short-term erosion and sedimentation potential during construction; would be minimized with best management practices and permit compliance. Possible impact to prime or unique farmland depending on locations. No impacts from operation.  A-2: Potential for construction impacts similar to but less than Alternative A-1 due to decreased total ground area disturbed for new construction.	Potential for construction impacts similar to but slightly higher than Alternative A due to slightly increased total ground area disturbed for new construction.	Potential for construction impacts similar to but less than Alternative A due to decreased total ground area disturbed for new construction.	Potential for construction impacts similar to but higher than Alternative A due to increased total ground area disturbed for new construction.	Potential for construction impacts similar to but much less than Alternatives A, B, or C due to likely smaller total ground area disturbed for new construction.	Potential for construction impacts similar to or less than Alternative C; would occur only in the case of exterior modifications requiring ground disturbance.	Construction impacts similar to or less than Alternative E, depending on the extent of renovation or construction.	

Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
Hydrology and Water Quality	<p>Minor and short-term spill, erosion, and sedimentation potential during construction; would be minimized with best management practices and permit compliance. Water supply and wastewater generation within capacity of existing sources / systems.</p> <p>A-2: Potential for construction impacts similar to but less than Alternative A-1 due to decreased construction footprint.</p>		<p>Potential for construction impacts similar to but slightly higher than Alternative A due to slightly increased construction footprint. Water supply and wastewater generation within capacity of existing sources / systems.</p>	<p>Potential for construction impacts similar to but less than Alternative A due to decreased construction footprint. Water supply and wastewater generation within capacity of existing sources / systems.</p>	<p>Potential for construction impacts similar to but higher than Alternative A due to increased construction footprint. Water supply and wastewater generation within capacity of existing sources / systems.</p>	<p>Potential for construction impacts similar to but much less than Alternatives A, B, or C due to small construction footprint. Water use and wastewater generation would be greater than Alternative F, and would also be met with existing capacity.</p>	<p>Potential for construction impacts similar to or less than Alternative E; would occur only in the case of exterior modifications requiring ground disturbance. Current rates of water use and wastewater generation would continue, within capacity of existing sources / systems.</p>	<p>Construction and renovation impacts similar to or less than Alternatives C or E, depending on the re-use. Water use and wastewater generation would be maintained within capacity of existing sources / systems.</p>

Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
Wildlife and Habitat	<p>Minimal habitat disturbance possible, depending on locations. Site survey for protected species, consultation and mitigation with state and federal wildlife agencies if needed would minimize potential for construction impacts. Negligible operation-related impacts to terrestrial or aquatic ecosystems.</p> <p>A-2: Potential for construction impacts similar to but less than Alternative A-1 due to decreased construction footprint.</p>		<p>Minimal habitat disturbance possible, depending on locations. Potential for construction impacts similar to but slightly higher than Alternative A due to slightly increased construction footprint. Negligible operation-related impacts to terrestrial or aquatic ecosystems.</p>	<p>Minimal habitat disturbance possible, depending on location for Rapid City MSOC. Potential for construction impacts similar to but less than Alternative A due to decreased construction footprint. Negligible operation-related impacts to terrestrial or aquatic ecosystems.</p>	<p>Minimal habitat disturbance possible, depending on locations. Potential for construction impacts similar to but higher than Alternative A due to increased construction footprint. Negligible operation-related impacts to terrestrial or aquatic ecosystems.</p>	<p>No construction or renovation in undeveloped areas; thus, no construction impacts. Negligible operation-related impacts to terrestrial or aquatic ecosystems.</p> <p>Minimal habitat disturbance possible, depending on locations (assuming MSOC would also be constructed in Rapid City.</p>	<p>No construction or renovation in undeveloped areas; thus, no construction impacts. Negligible operation-related impacts to terrestrial or aquatic ecosystems.</p>	<p>No construction or renovation in undeveloped areas; thus, no construction impacts. Negligible operation-related impacts to terrestrial or aquatic ecosystems.</p>



Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
Noise	Construction-related noise and vibration impacts would be short-term and potentially moderate in magnitude, depending on the locations in Hot Springs and Rapid City; daytime scheduling of construction activities and shielding would reduce impacts. Operation-related noise would be minor.		Similar to Alternative A, also depending on locations.	Similar to Alternative A, also depending on locations.	Similar to Alternative A, also depending on locations.	Construction and renovation-related noise and vibration impacts would be short-term and potentially moderate in magnitude for receptors on or near the Hot Springs Campus; daytime scheduling of construction activities and shielding would reduce impacts. Operation-related noise would be minor.	Renovation-related noise and vibration impacts would be short-term and potentially moderate in magnitude for receptors on or near the Hot Springs Campus; daytime scheduling of construction activities and shielding would reduce impacts. Operation-related noise would be minor.	Similar to Alternative E.

Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
Land Use	Temporary disturbances to adjacent land uses and users during construction. Sites selected for VA facilities would be generally compatible with and not substantially conflict with current or planned future land uses and zoning designations.  A-2: No impact to land use on VA Hot Springs campus or in City of Hot Springs			No impact to land use on VA Hot Springs Campus or in City of Hot Springs. Impact to land use in Rapid City similar to Alternative B.	Similar to Alternative B.	No impact to land use on VA Hot Springs Campus or in City of Hot Springs. Impact to land use in Rapid City similar to Alternative B.	Similar to Alternative C, except no impact in Rapid City.	Similar to Alternative C, except transfer to and re-use by non-federal proponent would be subject to Hot Springs land use planning and zoning. No impact in Rapid City.
Floodplains and Wetlands	No construction would occur within 100-year floodplains. If not feasible to avoid wetlands in site selection, VA would comply with federal and state coordination and permit requirements and, as needed, compensate for lost function and value.			Similar to Alternative A for location of Rapid City MSOC. No impacts in Hot Springs.	Similar to Alternative A.	No impacts.	No impacts.	No impacts.
Socioeconomics	<u>Hot Springs:</u> Beneficial but negligible impact to employment and housing during construction. Adverse minor to moderate impact to		<u>Hot Springs:</u> Similar to Alternative A, except more	<u>Hot Springs:</u> Similar to Alternative B during construction;	<u>Hot Springs:</u> Similar to Alternative B but slightly less during	<u>Hot Springs:</u> Minor to major beneficial impact to	<u>Hot Springs:</u> Moderate beneficial impact to housing	<u>Hot Springs:</u> Similar to Alternative C or E.

Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
	<p>housing and employment, adverse major impact to wages from operation.</p> <p><u>Rapid City:</u> Beneficial negligible impact to employment and housing during construction using local contractor. Beneficial but negligible impact to housing, employment, and wages from operation.</p> <p><u>Other Counties:</u> Adverse negligible impact.</p>		<p>beneficial because larger construction workforce, and slightly less adverse minor to moderate impact to employment, housing, and wages from operation.</p> <p><u>Rapid City:</u> Similar to Alternative A during construction but less. No measurable impact from operation.</p> <p><u>Other Counties:</u></p>	<p>same as Alternative B from operation.</p> <p><u>Rapid City:</u> Similar to Alternative B during construction; same as Alternative B from operation.</p> <p><u>Other Counties:</u> Same as Alternative B.</p>	<p>construction; similar to Alternative A from operation but slightly less.</p> <p><u>Rapid City:</u> Similar to Alternative A but slightly less during construction and from operation.</p> <p><u>Other Counties:</u> Similar to Alternative A but slightly less.</p>	<p>employment and housing during construction. Major beneficial impact to wages and major increase in employment with potential adverse effects from operation if not enough employable persons to fill available jobs.</p> <p><u>Rapid City:</u> Negligible to minor beneficial impact to housing, wages.</p>	<p>during construction; negligible impact from operation.</p> <p><u>Rapid City:</u> None.</p> <p><u>Other Counties:</u> None.</p>	<p><u>Rapid City:</u> None.</p> <p><u>Other Counties:</u> None.</p>

Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
			Similar to Alternative A.			<u>Other Counties:</u> Negligible beneficial impact.		
Community Services	<p>Negligible construction-related impact on local clinics / hospitals; fire, police, and emergency response; school districts; and parks / recreational facilities.</p> <p>No increase in demand for fire, police, and emergency response in Hot Springs or Rapid City from operation.</p> <p>Moderate decrease in school enrollment in Hot Springs and minor to moderate decrease in revenue support in Hot Springs; negligible change in Rapid City.</p>		Similar to Alternative A but slightly less for Hot Springs.	<p>Construction-related impact similar to Alternative A but slightly less for Rapid City.</p> <p>Same as Alternative B from operation.</p>	Similar to Alternative A but slightly less for Hot Springs and Rapid City.	<p>Constructed-related impact similar to Alternative C, except impact to schools similar to Alternative A. Moderate additional demand on fire, police, and emergency services; moderate to major increase in school enrollment, beneficial impact to</p>	<p>Negligible construction-related impact to Hot Springs community services; no impact to Rapid City. No operation-related impact.</p>	Similar to Alternatives C or E.

Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
						funding community services in Hot Springs from operation. Negligible change in Rapid City.		
Solid Waste and Hazardous Materials	Construction-related solid waste generation would have a negligible effect on remaining landfill capacities. Solid, medical, and hazardous waste generation rates (increased in Rapid City, decreased in Hot Springs) would have a negligible impact on treatment and disposal facilities.		Similar to Alternative A, except that operational rates of solid, medical, and hazardous waste generation would increase less in Rapid City, and decrease less in Hot	Similar to Alternative B, except that special wastes (asbestos-containing materials, lead-based paint) could also be generated.	Similar to Alternative A, except that operational rates of solid, medical, and hazardous waste generation would increase slightly less in Rapid City, and only slightly decrease in Hot Springs.	Construction- and renovation-related waste generation could include special wastes (asbestos-containing materials, lead-based paint); there would be a negligible effect on remaining landfill	Renovation-related waste generation could include special wastes (asbestos-containing materials, lead-based paint); would have a negligible effect on remaining landfill capacities. Solid, medical,	Similar to Alternatives E and F.

Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
			Springs.			capacities. Solid, medical, and hazardous waste generation rates (increased in Hot Springs, unchanged in Rapid City) would have a negligible impact on treatment and disposal facilities.	and hazardous waste generation rates would not change and would have a negligible impact on treatment and disposal facilities.	
Transportation and Traffic	Temporary disruption to road networks and traffic circulation during construction. Vehicle trips decrease in Hot Springs; potential adverse impact on traffic congestion in Rapid City with operation. Potential increase in demand for public transportation.		Similar to Alternative A except impact more extensive for Hot Springs.	Similar to Alternative A but less extensive.	Similar to Alternative A but more extensive for Hot Springs and less extensive for Rapid City.	Similar to Alternative A but more extensive for Hot Springs. No impact for Rapid City.	Similar to Alternative C but less extensive. No impact for Rapid City.	Similar to Alternatives C or E. No impact for Rapid City.

Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
Utilities	Projected utility requirements are within the capacity of existing systems. Energy efficiency and water conservation improvements compared to existing facilities could be incorporated. If the Hot Springs VA Campus is not in use, there could be a concern for proper functioning of the Hot Springs wastewater treatment plant, but the threshold for this issue is not known. known. A significant reduction in flow could result in adverse impacts to Hot Springs wastewater treatment plant.			Projected utility requirements are within the capacity of existing systems. Renovations could include modifications to improve energy efficiency and water conservation at Hot Springs VA Campus. Decreased wastewater flow to the Hot Springs wastewater treatment plant could occur, but the threshold effects to the	Similar to Alternative A.	Utility requirements in Rapid City would remain the same. Requirements in Hot Springs would increase but remain within the capacity of the existing systems. Renovations could include modifications to improve energy efficiency and water conservation at Hot Springs VA Campus.	Utility requirements would remain the same, and continue to be within the capacity of existing systems. Renovations could include modifications to improve energy efficiency and water conservation at Hot Springs VA Campus.	Similar to Alternatives C, E, or F, depending on the type of re-use.

Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
				plant’s function is not known.				
Environmental Justice	No disproportionate health or environmental effects to environmental justice communities. Improved geographic access to care except for proximity to RRTP services for Veterans closer to Hot Springs than Rapid City.	No disproportionate health or environmental effects to environmental justice communities . Improved geographic access to care except for proximity to RRTP services for Veterans closer to Rapid City than Hot Springs.	No disproportionate health or environmental effects to environmental justice communities. Improved geographic access to care except for proximity to RRTP services for Veterans closer to Rapid City than Hot Springs.	No disproportionate health or environmental effects to environmental justice communities. Improved geographic access to care.	No disproportionate health or environmental effects to environmental justice communities. Improved geographic access to care.	No disproportionate health or environmental effects to environmental justice communities. Similar impacts related to geographic access to care as Alternative F.	No disproportionate health or environmental effects to environmental justice communities. Would continue to not meet VA guideline for acceptable geographic access to care (driving time to obtain care) in service area.	No health or environmental effects to environmental justice communities expected.
Cumulative	No significant cumulative impacts identified in Hot Springs or Rapid City for any resource area under any alternative except for							



Resource / Issue	A - Hot Springs CBOC, Rapid City MSOC and RRTP		B - Hot Springs CBOC and RRTP, Rapid City MSOC	C - Hot Springs Existing Campus CBOC and RRTP, Rapid City MSOC	D - Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP	E - Save the VA Proposal	F - No Action	Supplemental G - Re-use of Hot Springs Campus
	A-1 new CBOC in Hot Springs	A-2 CBOC Hot Springs Existing Campus						
Impacts	<p>socioeconomics as noted below. Potential cumulative impacts to historic resources are also a concern but would be addressed through mitigation measures.</p> <p>Socioeconomics: Given the past economic decline in Hot Springs and Fall River County region, resulting from a number of different circumstances, the proposed reduction in employment and wages could have potentially significant impact to the Fall River County and local Hot Springs community under Alternatives A-1, A-2, B, C and D. However, the recently proposed national VHA Pharmacy call center, which would be located in Buildings 3 and 4 on the existing Hot Springs Campus, would bring in 120 new jobs that would help offset the employment losses under Alternatives A-1 through D. Cumulative impacts under Alternative E would result in an overall beneficial impact on the economy.</p> <p>Cultural Resources: There could be a cumulative direct effect to the Hot Springs Historic District if exterior renovations, new construction, and aesthetic changes on the VA Hot Springs Campus, together with other ongoing and planned construction in Hot Springs, contrast with the historic setting, feeling, and association of the Hot Springs Historic District. Measures to resolve adverse effects would be designed and implemented to avoid or minimize effects. No anticipated change in status of NHL listing.</p> <p>Regarding campus reuse (Alternatives A-1, A-2, B, C and D with Alternative G, the marketing strategy included in the measures to resolve adverse effects takes into account potential for shared campus. Campus redevelopment would be subject to restrictions of the measures to resolve adverse effects to Battle Mountain Sanitarium and the Hot Springs Historic District.</p>							

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Cumulative impacts from the incremental impact of the alternatives when added to other past, present, or reasonably foreseeable actions in the VA BHHCS service area are expected to be absent, negligible or minor for aesthetics, air quality, geology and soils, hydrology and water quality, wildlife and habitat, noise, floodplains and wetlands, solid waste and hazardous materials, utilities, and environmental justice. Any impacts to these resources would be similar to current VA health care services operations or to other new private and commercial developments that may occur within Hot Springs and Rapid City, and would include mitigation measures to minimize impacts. There are potential cumulative effects related to cultural resources, land use, socioeconomic conditions, and transportation and traffic, depending in most cases on the location(s) selected for new facilities. Potential cumulative impacts on the local economy resulting from the proposed reconfiguration in combination with the recent economic downturn are potentially significant, although the proposed new national VHA Pharmacy call center, which would be located on the existing Hot Springs campus, would bring in 120 new employees, and would help offset the staffing losses under the proposed reconfiguration. Mitigation measures and measures to resolve adverse effects to historic properties described in the EIS would be applied to reduce any such impacts. In particular, effects to historic properties would be avoided, minimized, and/or mitigated by measures developed in consultation with the historic properties consulting parties for the integrated Section 106 process.

VA published a Notice of Availability (NOA) on this Draft EIS in the Federal Register on November 6, 2015, inviting public comments on the content of the document. The public comment period began on November 6, 2015 and included three separate extensions that ended on June 20, 2016. Responses to comments received during the comment period have been addressed in the Final EIS. After a 30-day review period for the Final EIS, VA will publish a record of decision that states the alternative selected for implementation and identifies associated mitigation commitments.

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## 1.0 INTRODUCTION, INCLUDING PURPOSE AND NEED

The United States (U.S.) Department of Veterans Affairs (VA) Black Hills Health Care System (BHHCS) announced in December 2011 their determination of a need to reconfigure VA BHHCS to enhance and maintain the quality and safety of care for Veterans in the 100,000-square mile service area, referred to as the “catchment area.” In this environmental impact statement (EIS), VA identifies, analyzes, and documents the potential physical, environmental, cultural, and socioeconomic impacts associated with the proposed reconfiguration of VA BHHCS.

This EIS is conducted in accordance with the *National Environmental Policy Act of 1969* (NEPA) (42 United States Code [U.S.C.] 4321 et seq.), the Council on Environmental Quality’s (CEQ’s) regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), VA’s NEPA regulations titled “Environmental Effects of the Department of Veterans Affairs Actions” (38 CFR Part 26), and VA’s “NEPA Interim Guidance for Projects” (VA 2010a). NEPA and these regulations require that VA, as a federal agency, must evaluate the potential environmental impacts of the agency’s major actions significantly affecting the quality of the human environment. While the timing of the NEPA review was called into question during the public comment period on the Draft EIS, the NEPA process is being conducted at an appropriate time - initiating it when the proposal is sufficiently ripe for analysis and completing it early enough to support an informed Agency decision prior to the implementation of any Agency action.

This EIS substitutes NEPA review for the Section 106 process, which requires consultation on effects to historic properties under Section 106 of the *National Historic Preservation Act* (NHPA) (16 U.S.C. 470f). CEQ’s regulations direct agencies to integrate NEPA requirements with other planning and environmental review procedures (40 CFR 1500.2(c)), including those required by NHPA (40 CFR 1502.25(a)). This integrated process complies with the Advisory Council on Historic Preservation (ACHP) “Procedures for the Protection of Historic Properties” (36 CFR Part 800), including the “Use of the NEPA process for Section 106 purposes” (36 CFR 800.8(c)) and the joint CEQ-ACHP guidance *NEPA and NHPA: A Handbook for Integrating NEPA and Section 106* (CEQ-ACHP 2013).

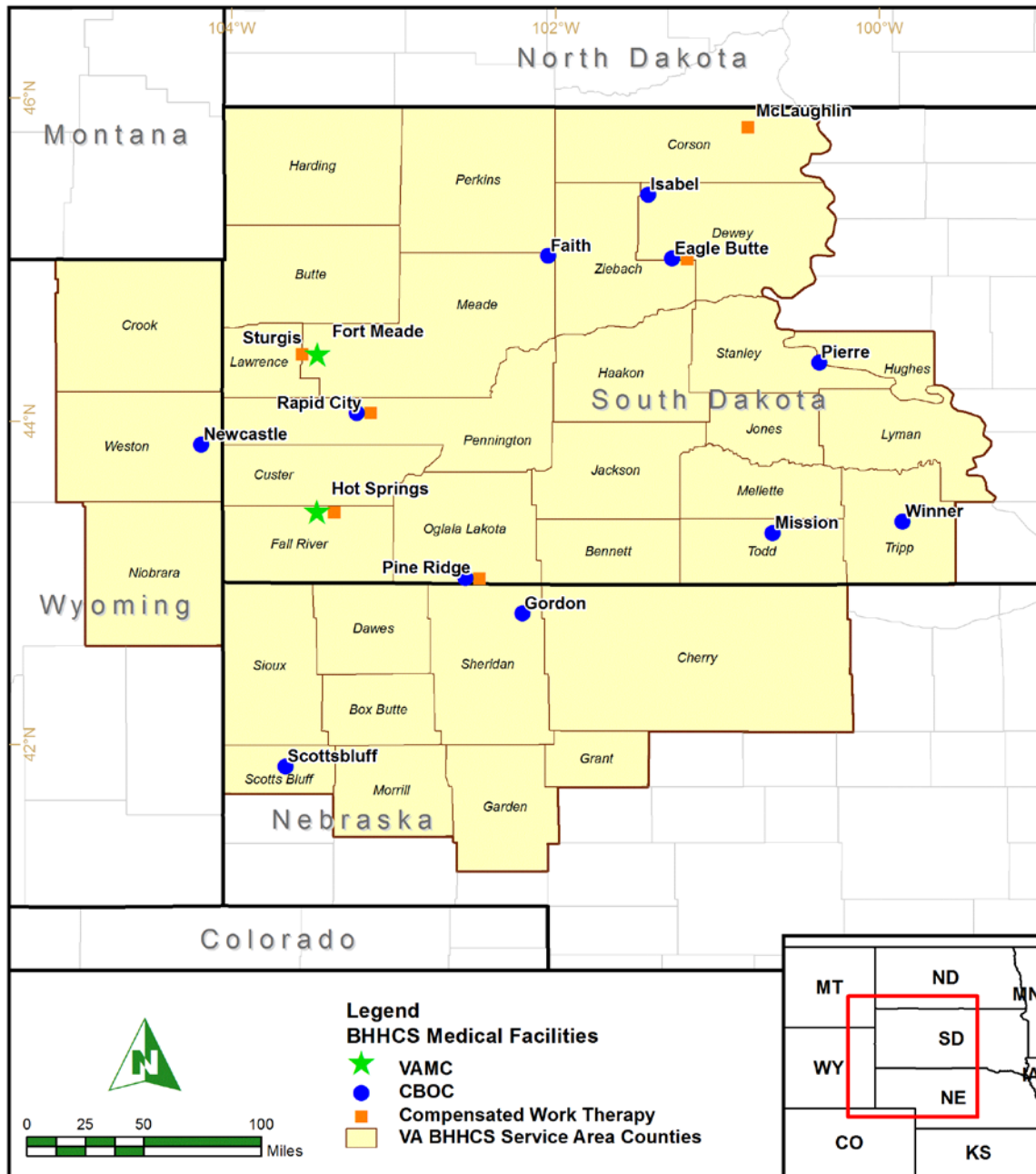
The potential environmental impacts of seven alternatives for carrying out the proposed reconfiguration (six alternatives with two variations on one alternative) are analyzed in this EIS. Alternatives A through D incorporate varying combinations of new construction or leases, and use of existing facilities. Alternative E is a proposal developed by Save the VA, a local community organization. Alternative F is the No Action alternative, which is required by NEPA and its regulations and also provides a baseline for comparing potential impacts from the action alternatives. Supplemental Alternative G, repurposing all or part of the existing Hot Springs facility, is a supplemental alternative that could be implemented in concert with Alternatives A through D.

### 1.1 Black Hills Health Care System

VA BHHCS is one of eight regional health care systems that comprise Veterans Integrated Service Network (VISN) 23 (also called the Midwest Health Care Network), one of 18 geographically defined networks within VA’s Veterans Health Administration (VHA). VA BHHCS provides health care to approximately 19,000 Veterans over 100,000 square miles in western South Dakota (SD),

southern North Dakota (ND), northwestern Nebraska (NE), and eastern Wyoming (WY) (see Figure 1-1).

Figure 1-1. VA Black Hills Health Care System



## 1.1.1 Services and Partnerships

VA BHHCS provides the following services to Veterans at a network of facilities owned, leased, or where services are contracted by VA BHHCS:

- Compensated Work Therapy (CWT)
- Dialysis
- Home-Based Primary Care
- Inpatient medical care (also referred to as “acute care”)
- Laboratory
- Long-term care (Community Living Center)
- Mental Health
- Mobile imaging, such as Magnetic Resonance Imaging and Computed Tomography scans
- Call Center
- Pharmacy services
- Physical Therapy
- Primary Care
- Residential Rehabilitation Treatment Program (RRTP)
- Specialty care
- Surgical services
- Emergency/Urgent care
- X-ray
- Rehabilitation medicine

In addition, VA BHHCS has service agreements with other federal, state, and private entities:

- Provides radiology services to non-Veteran Native Americans in cooperation with Pine Ridge and Sioux San Indian Health Service (IHS) facilities.
- Reimburses IHS for authorized care received by Native American Veterans at IHS facilities.
- Memorandum of understanding with South Dakota Army National Guard at Fort Meade to provide urgent care for officer candidate school students.
- Provides onsite social work, nutrition, and behavioral health care to eligible Veterans residing in the Michael J. Fitzmaurice State Veterans Home in Hot Springs.
- Provides dialysis at the Hot Springs facility for Medicare recipients, and bills Medicare for reimbursement (a VA/Medicare partnership unique to VA BHHCS).
- Coordinates care of Veterans by a non-VA provider, which is referred to as **Care in the Community (CITC)**. VA provides a referral, an appointment is scheduled in coordination with the Veteran, pays the fee, and manages the patient as needed based on outcome (i.e., individual care coordinated by VA BHHCS RN case manager).

## 1.1.2 Facilities

VA BHHCS consists of two medical centers, 11 community-based outpatient clinics (CBOCs), and six CWT locations. Table 1-1 summarizes the BHHCS facilities.

**Table 1-1. Existing VA BHHCS Medical Facilities.**

Medical Centers	Compensated Work Therapy
Fort Meade, SD – hospital and outpatient services Hot Springs, SD – hospital, outpatient services, and R RTP	Transitional residence care units (VA staffed): Hot Springs, SD – at VA Hot Springs Campus Pine Ridge, SD – co-located with Pine Ridge CBOC Rapid City, SD VA-owned, separate building from CBOC Sturgis, SD – VA- owned building  Therapy program offices (VA staffed): Eagle Butte, SD – leased facility, separate building from CBOC Pine Ridge, SD – co-located with Pine Ridge CBOC McLaughlin, SD (also provides mental health outreach) – leased facility
Community-Based Outpatient Clinics	
VA-owned and staffed: Pine Ridge, SD  VA-staffed leased facility: Rapid City, SD Newcastle, WY Gordon, NE  Contracted: Eagle Butte, SD -Faith, SD -Isabel, SD Mission, SD Pierre, SD Winner, SD Scottsbluff, NE	

### **1.1.2.1 Fort Meade Campus**

The Fort Meade campus is located at 113 Comanche Road in Fort Meade, SD. The Fort Meade campus offers Primary Care, emergency medical care, Pharmacy services, inpatient (18 medical/surgical and 10 mental health staffed beds) and outpatient specialty and surgical care, Intensive Care Unit (4 staffed beds), operating rooms, laboratory services, x-ray and mobile imaging, Physical Therapy, and Mental Health services. Fort Meade campus also has 57 staffed beds for long-term care in a Community Living Center (nursing home).

**The VA BHHCS reconfiguration proposal does not include any changes to the facilities at the Fort Meade Campus.** Fort Meade campus is an active medical center that services Veterans throughout the VA BHHCS catchment area. Since the reconfiguration proposal became public in 2011, some operational changes have been made within the VA BHHCS between 2012 and 2015, when the Draft EIS was published. Recently, a new two-story addition was constructed on the North Wing of Building 113 to house a new surgery department. Some EIS commenters believed that the Fort Meade construction and renovation projects are part of the proposed reconfiguration and should have been addressed as such in the EIS. Construction projects not associated with the proposed reconfiguration have occurred within VA BHHCS throughout its history to keep pace with the advances in health care. The construction of the surgery addition is intended to modernize



and improve the overall quality of care. The Fort Meade campus will likely require future modifications to conform to modern health care needs; but neither the recent, nor any future undertakings, are related to the proposed reconfiguration. The recent surgery addition has been addressed in a separate NEPA review (Holmgren 2013) and NHPA Section 106 consultation process with a SHPO determination of no effect on historic properties (Vogt 2013).

- *The renovations at Fort Meade were not designed for increased workload redirected from the Hot Springs Campus; nor does the proposed reconfiguration evaluated in this EIS direct Veteran patients from Hot Springs to Fort Meade. Rather VA recognizes Veterans already travel too far to receive health care and the proposed reconfiguration addresses this need (i.e., decreasing the amount of driving for Veterans) by purchasing care in the communities closer to where Veterans live.*
- *In the past two years, VA has been given authority to expand the Care in the Community program. As a result, care in the community has become an integral part of the proposed reconfiguration alternatives - as a way to improve overall quality and delivery of care, thereby addressing the geographic access concerns.*

The Fort Meade facility is considered in this EIS, however, only to the extent that: (1) consulting parties under the NEPA/NHPA substitution process requested that the Area of Potential Effect be expanded (for historic resources only) to include Fort Meade because of its historic status (Section 3.3 and 4.3); and (2) the recent construction activities are considered as part of the cumulative impact analysis since Fort Meade is a medical facility used by Veterans within the BHHCS service area (Section 3.16). No adverse impacts to cultural / historic resources or cumulative impacts were identified from ongoing activities at Fort Meade.

### **1.1.2.2 Hot Springs VA Medical Center**

The Hot Springs campus occupies 71.7 acres at 500 North 5th Street in Hot Springs, SD. It opened its doors in 1907 as the Battle Mountain Sanitarium National Home for Disabled Volunteer Soldiers, and was listed as a National Historic Landmark in 2011. Section 3.3 of this EIS provides a detailed description of the historic significance of the Hot Springs Campus.



**Aerial view of Battle Mountain Sanitarium, Hot Springs.**

The Hot Springs Campus provides Primary Care, Urgent Care, Pharmacy services, outpatient procedures, inpatient medical care (10 beds), Dialysis, x-ray and mobile imaging, specialty care, Laboratory services, Mental Health services, and a Call Center. The medical center also includes seven beds (co-located with the 10-bed medical unit) for long-term care in a Community Living Center (nursing home) and 100 RRTP beds. The RRTP serves homeless Veterans and provides mental health services for post-traumatic stress disorder, substance abuse, alcohol abuse, and other conditions.

In addition, VA is proposing to create a National VHA Pharmacy call center in Buildings 3 and 4 of the Hot Springs Campus of the VA Black Hills Health Care System (VA BHHCS); it would potentially open before the end of 2016 and is expected to employ up to 120 persons. Hot

Springs is one of several sites being considered as part of a national search for a VHA Pharmacy Call Center location. The VHA Pharmacy Call Center would serve all Veterans and their beneficiaries and serve as a contact center for pharmacy related inquiries.

The VHA Pharmacy Call Center is not related to the proposed reconfiguration and its implementation would not impact the still pending decision regarding the reconfiguration of health care services in the VA BHHCS service area (see additional discussion in Section 1.3). The VHA Pharmacy Call Center, if implemented, will not be managed by VA BHHCS. Rather, this initiative will be pursued by the National program office regardless of the ultimate decision regarding the reconfiguration proposal, giving it independent utility.

Nor would its implementation and use of existing Buildings 3 and 4 preclude implementation of any of the proposed alternatives, described in detail in Chapter 2, especially those involving a continued VA presence on the existing Hot Springs Campus. These include Alternatives C and F, and the new Alternative A-2 and modified Alternative E, both of which are included in the Final EIS in response to public comments. The reasons are as follows:

- **New Alternative A-2** would not affect Buildings 3 and 4 as the proposed CBOC would be included in a newly renovated Building 12 (see Section 2.3.1).
- There is sufficient room in other wards within the existing Domiciliary to accommodate up to a 110-bed RRTP under **Alternative C** and a 160-bed RRTP as proposed under **Save the VA Alternative E** (see Section 2.3.5), as well as the VHA Pharmacy Call Center in Buildings 3 and 4.
- The RRTP configurations under the No Action Alternative F, show Buildings 3 or 4 are currently either unused or underutilized, which is why they are available for the VHA Pharmacy Call Center.

Even though the proposed VHA Pharmacy Call Center is not part of the proposed reconfiguration, it is a reasonably foreseeable future action that would occur on the existing Hot Springs Campus; therefore, it has been added as a new action addressed in the cumulative impact analysis. See additional discussion in Sections 3.16 and 4.16. Potential direct impacts are expected to be minimal as the required renovations would be limited to interior work only.

VA BHHCS is in the process of conducting the appropriate level of NEPA review and NHPA Section 106 consultation process for the proposed VHA Pharmacy Call Center; a copy of the Section 106 Consultation letter was delivered to Consulting Parties on September 27, 2016 (Horsman 2016a). This call center is expected to qualify as a categorical exclusion. SHPO has concurred with VA's conclusion that the proposed call center undertaking would have no adverse effect on the historic integrity of Buildings 3 and 4 (Horsman 2016b).

Finally, it is important to distinguish between the proposed new VHA Pharmacy Call Center and the existing local call center that has been in operation on the Hot Springs Campus since 2010 and serves Veterans throughout the VA BHHCS. The local call center staff includes a Nurse Manager, RNs, LPN's and scheduling clerks who handle calls from Veterans who need assistance on health care advice, scheduling appointments and pharmacy refills specific to VA health care systems within VISN 23. Continued operation of the local call center is included within the health care services proposed under all of the alternative reconfiguration proposals.

### 1.1.2.3 Community-Based Outpatient Clinics

The 11 CBOCs in the BHHCS provide mainly primary care service, as summarized in Table 1-2.

**Table 1-2. BHHCS Community-Based Outpatient Clinics.**

Location	Hours	Services <sup>1</sup>	Facility and Staffing
3625 5th Street <b>Rapid City, SD 57701</b>	Monday – Friday 7:00 a.m. – 4:30 p.m.	Primary care, specialty care, and mental health	Leased facility. Staffed and equipped by VA.
8000 Highway 212 <b>Eagle Butte, SD 57625</b>  -112 N. 2nd Ave. W. <b>Faith, SD 57626</b>  -118 N. Main St. <b>Isabel, SD 57633</b>	Monday – Friday 8:00 a.m. – 3:30 p.m.	Primary care	Contract clinic operated by Horizon Health
153 Main Street <b>Mission, SD 57555</b>	Monday – Friday 7:30 a.m. – 5:00 p.m.	Primary care	Contract clinic operated by Horizon Health Care Inc.
1601 North Harrison Suite 6 <b>Pierre, SD 57501</b>	Monday – Friday 8:00 a.m. – 5:00 p.m.	Primary care	Contract clinic operated by Linn Medical Clinic
Next to Dialysis Building, across from IHS Hospital <b>Pine Ridge, SD 57770</b>	2nd and 4th Mondays 8:00 a.m. - 3:30 p.m.	Primary care and CWT	VA-owned facility. Staffed by VA.
1436 East 10th Street <b>Winner, SD 57580</b>	Monday – Friday 8:00 a.m. – 5:00 p.m.	Primary care	Contract clinic operated by Avera Health.
300 East 8th Street <b>Gordon, NE 69343</b>	Monday – Friday 8:00 a.m. – 5:00 p.m.	Primary care	Contract clinic operated by Gordon Memorial Hospital District.
1720 E Portal Place <b>Scottsbluff, NE 69361</b>	Monday – Friday 7:00 a.m. – 4:30 p.m.	Primary care	Contract clinic operated by ONS (effective 10- 01-16)
1124 Washington Blvd. <b>Newcastle, WY 57555</b>	1st and 3rd Mondays 8:30 a.m. - 2:30 p.m.	Primary care	Leased space. Staffed by VA.

<sup>1</sup> The facility provides services that fall within the listed category, but does not necessarily provide the entire range of services in that category.

### 1.1.2.4 Compensated Work Therapy

CWT is a VA vocational rehabilitation program that matches and supports work-ready Veterans in competitive jobs in consultation with business and industry regarding their specific employment needs. VA BHHCS staff provide CWT services at leased facilities in Eagle Butte and McLaughlin,

SD, and a VA-owned facility in Pine Ridge, SD. The health care system also has four CWT transitional residence care units, in Hot Springs, Pine Ridge, Rapid City, and Sturgis, SD.

### **1.1.3 Veteran Population in VA BHHCS Catchment Area**

The VA BHHCS services Veterans residing in a rural market spanning over 100,000 square miles. The 34 counties in the VA BHHCS catchment area were home to over 35,000 Veterans in fiscal year (FY) 2014. Approximately 60 percent (21,000) percent of these Veterans were both eligible for and had enrolled to receive care at a VA facility. Eligibility for VA health care is determined by type of service in the military, condition of separation from service, and length of duty. Once enrolled, a Veteran is assigned to one of eight priority groups. Availability of the congressionally allocated funds for Veterans health benefits is prioritized among these groups, considering factors such as service-connected disabilities, former prisoners of war, Purple Heart or Medal of Honor recipients, other aid received from VA, income, VA pension recipients, Medicaid eligibility, and certain specific service assignments, exposures, or conflicts (VA 2015a).

Numbers of Veterans residing in the catchment area, enrolled in VA health care, and receiving health care services provided by VA BHHCS vary with the time period covered if they are actual counts, or with the model and its baseline if they are projections. The sources and data for current and projected Veteran population and health care enrollees and service recipients are described in Section 1.2.2.5.

### **1.1.4 Employees**

At the end of FY 2014, VA BHHCS employed 1,103 individuals, with 1,021 full-time and 82 part-time. The workforce represented a total of 1,069 full-time equivalent employees. The staff included 42 physicians, 271 nurses, and 29 physician assistants and nurse practitioners. Other employees included ancillary medical, housekeeping, administrative, and facilities management staff. There were also 301 volunteers that provided transportation; served in the Honor Guard; visited patients; and provided information desk, clerical, and other services.

Comments during both the scoping and Draft EIS included requests that VA recognize and evaluate effects of VA's changes to health care services at the Hot Springs Campus, including changes in employment, since 2000 (following integration of the Hot Springs and Fort Meade campuses in the 1990s that affected staffing levels within VA BHHCS).

The VA acknowledges the change in health care services and staffing that has occurred at Hot Springs over the past 20 years. Changes in health care services and any associated redirecting of staff resources provided at a given facility are at VA's discretion in order to meet, as needed, the directives of its mission and continue to provide quality care to Veterans throughout the catchment area. Such decisions are not subject to NEPA review: economic or social effects are not intended by themselves to require preparation of an environmental impact statement." (40 CFR 1508.14); therefore, they are not directly analyzed in this EIS which focuses on the evaluation of potential impacts from the physical facilities and infrastructure in which health care services are offered to Veterans.

However, to the extent that past changes in health services have resulted in a change in employment, the analysis of cumulative impacts (Section 4.16) has been revised to examine past employment trends in Fall River County and the Hot Springs community as a way to look at the accumulated

effect of past actions. This would encompass the changes in staffing that have occurred within the Hot Springs facility over the years.

### **1.1.5 Change in Hot Springs Campus Designation**

In 2010, the Hot Springs Campus was designated as a basic-level ambulatory surgical facility. This current designation limits the types of procedures that surgeons and the support team can conduct at the facility (see discussion below on critical mass of patients to support a service or specialty care, e.g., surgeries). Prior to this designation, VA BHHCS had been discontinuing providing certain medical services at the Hot Springs Campus at points when the infrastructure (as described in the discussion of critical mass of patients below) was determined to no longer safely support that service or type of care. This prospective mitigation of risk was to specifically prevent an increased rate of unfavorable medical events. For current inpatients at the Hot Springs Campus, physicians carefully review the support care known to be needed or that potentially could be needed to determine whether it is available, and, if not, the patient is transferred to a facility where the appropriate level of medical care can be provided to the patient.

Some of the concerns generated by the low patient volume at Hot Springs Campus include:

- The availability of a surgeon and other health care providers after a surgery in the case of post-operative complications; the last operating room procedure was performed in Hot Springs in April 2011.
- The Hot Springs Campus has a low acute inpatient census, averaging five patients in the 10 available beds. When alcohol detoxification, which is provided on an outpatient basis in most treatment settings, is subtracted, the average acute inpatient daily census decreases to less than four patients. This low patient volume detracts from a licensed professional staff member's ability to attain and retain core competencies.
- Within a finite budget, VA must ensure that resources are appropriately allocated and reasonably balanced among all eligible Veterans throughout the entire VISN. A consideration in determining which medical specialties are offered at specific VISN locations is whether the size of the Veteran population within a reasonable driving distance correlates with an appropriate per-patient cost. If the size of the area containing a sufficient Veteran population for supporting a specialty must be drawn too widely, choices must be made regarding offering that specialty in-house and whether non-VA care purchased from community providers (now referred to as Care in the Community, or CITC) could offer better geographic access to the Veteran population, as funds generally do not allow for both approaches to providing a single specialty service within the same geographic area.

### **1.1.6 Critical Mass of Patients to Support a Service or Specialty**

Hot Springs Campus has insufficient patient volume to support services or specialties in addition to those currently provided. In fact, some of the services currently provided are not adequately supported.

For any particular health service, a certain patient volume is required for a facility to responsibly offer that service, medically and financially. In 2010, VA completed a nationwide review of surgical facilities and classified each one to ensure that scheduled (non-emergency) surgical procedures do not exceed the infrastructure capabilities (see [www.va.gov/health/surgery/](http://www.va.gov/health/surgery/)). Facility infrastructure



refers to diagnostic evaluation; consultation; surgical physician staffing; operating room staffing, instruments, equipment, coverage, and radiology; anesthesia services; post-anesthesia care unit; intensive care unit; ward; supply, processing, and distribution; and other support services related to a surgical procedure. Each inpatient surgical program was assigned a "surgical complexity" level of *standard* (such as an appendectomy), *intermediate* (such as a shoulder joint reconstruction), or *complex* (such as coronary artery bypass surgery); and each ambulatory (outpatient only) surgery center was assigned a surgical complexity level of either *basic* (for example, surgical removal of a skin cancer) or *advanced* (such as laparoscopic gallbladder removal). A facility can request a change to a more or less complex designation in compliance with VA policies on restructuring clinical programs and with documented changes in infrastructure.

Because community providers of urgent care and specialty services are available in this rural area, VA BHHCS maintains a program for Veterans to obtain purchased care from non-VA providers (now referred to as CITC). VA has found this approach to be medically responsible and fiscally reasonable. In addition, it relieves Veterans throughout the catchment area from the travel burdens that would be imposed if, in order to support a particular specialty at Hot Springs, Veterans were then required to use a VA provider to ensure adequate patient volume to support that service.

## 1.2 Purpose of and Need for Reconfiguration of the BHHCS

The “purpose and need” element of an EIS explains why the action being proposed is needed, and serves as the basis for developing a reasonable range of alternatives. The purpose consists of the objectives of the proposed action that address an underlying condition or correct a problem. The need is the underlying condition or problem that leads the agency to propose the action.

### 1.2.1 Statement of Purpose and Need

The *purpose* of VA’s proposal to reconfigure health care services in the BHHCS is to provide high-quality, safe, and accessible health care for Veterans well into the twenty-first century by:

- Providing locations and facilities that support VISN 23’s efforts to enhance and maintain quality and safety of care in the 100,000-square-mile catchment area
- Ensuring facilities for Veterans receiving any services comply with accessibility requirements for handicapped individuals, support current standards of care, and can be well-maintained within available budgets and resources
- Increasing access to care closer to where Veterans live
- Reducing out-of-pocket expenses for Veterans’ travel

VA has identified a *need* to reconfigure health care services in the BHHCS catchment area because:

- VA has difficulty maintaining high-quality, safe, and accessible care at the Hot Springs Campus.
- Existing locations and facilities constrain the quality of care, range of services, and access to care that VA offers to Veterans in the catchment area.

The factors that contribute to this determination of need are described in Section 1.2.2.

## 1.2.2 Factors Resulting in Need for Reconfiguration of BHHCS

VA BHHCS has identified the need to improve the availability of high quality, safe and accessible health care services for Veterans residing in the VA BHHCS. In particular, the quality of care at the Hot Springs facility is constrained, for reasons listed below and described more fully in subsections 1.2.2.1 through 1.2.2.4:

- VA has difficulties recruiting and retaining qualified staff to work at that location, and maintaining clinical competency of Hot Springs staff due to low patient volume.
- The Hot Springs Campus needs significant renovation to maintain clinical standards and for continued facility sustainment. It does not comply with the *Architectural Barriers Act* and with VA accessibility requirements.
- Limited ability of RRTP to meet current VA Standards for Residential Treatment relating to single parent Veterans or Veterans with families, and the requirements for VA's recovery model of care, even with enhancement of existing facilities.
- High facility costs to maintain two older hospitals with extensive infrastructure and overlapping services negatively affect VA's stewardship of funds appropriated for Veterans health care.

VA also needs to address the constraints on services and access due to existing locations, as identified below and described more fully in subsections 1.2.2.5 and 1.2.2.6:

- Current and projected future Veteran population centers in the BHHCS catchment area are not in the same locations as existing VA facilities.
- Veterans currently face long distances, extended travel times, and travel costs to access primary and secondary care.

### 1.2.2.1 *Difficulty Recruiting and Retaining Qualified Staff, and Maintaining Clinical Competencies*

VA BHHCS has difficulty recruiting and retaining qualified staff at the Hot Springs Campus. This difficulty has been encountered for physicians, nurses, and some ancillary medical positions, including both hospital and RRTP (e.g., psychiatrist, social workers) medical professionals. The issues that contribute to this factor include:

- Low patient volume detracts from a licensed professional staff member's ability to attain and retain core competencies (also discussed previously in Section 1.1.5). Inpatient care, a reduced volume of procedures and decreasing familiarity with medications and treatment modalities increases the risk of error. In the Joint Commission's advice to the public *Helping You Choose: Quality Hospital Care*, the first question of 25 that are recommended is "Ask about the operation or treatment that you need. How often is it performed?" (Joint Commission 2013). Medical professionals may be expected to factor procedure volume into their decisions about where to practice, and providers will likewise consider this when evaluating what medical services to offer from a particular facility (see Section 1.1.5 discussion of "Critical Mass of Patients to Support a Service or Specialty").

- The federal government has difficulty in matching private sector salaries in addition to competing with a nationwide shortage of professional medical staff (see, for example, HRSA 2013). Some specialties are difficult to recruit in Hot Springs (orthopedics, laboratory technologists, sleep laboratory technicians, internal medicine, psychiatry, respiratory therapists, mental health professionals), even given the availability of the Education Debt Reduction Program, recruitment incentives, and enhanced salary rates.
- The rural location limits the appeal of relocating to Hot Springs. The U.S. Department of Labor's Bureau of Labor Statistics stated that "Job prospects should be good for physicians who are willing to practice in rural and low-income areas, because these areas tend to have difficulty attracting physicians" (BLS 2015). VA offers recruitment/relocation incentives of up to 25 percent of basic pay, but recruitment for this location remains a challenge.
- Overall, affecting both public and private sector healthcare providers, Fall River County, SD, is designated as a "health professional shortage area" for all three categories reviewed: primary care, dental care, and mental health care (HHS 2015).

These recruiting and retention difficulties have resulted in high staff turnover, prolonged position vacancies, and more dependence on physicians who specifically seek positions through contracted employment for only a short period, usually a few weeks to a few months (referred to as "locum tenens" physicians).

The positions in and of themselves are not unattractive. The only part-time medical positions in Hot Springs for which VA BHHCS has tried to recruit are a surgeon and a certified registered nurse anesthetist, in both cases because full-time positions could not be supported by the workload.

The recruiting difficulties also affect and are affected by the limits on the designated level of medical services that VA can provide at the Hot Springs Campus (basic-level ambulatory; see Section 1.1.5 discussion of "Critical Mass of Patients to Support a Service or Specialty").

### 1.2.2.2 Accessibility and Needed Renovations

Federal agencies must comply with the *Architectural Barriers Act* (42 U.S.C. 4151 et seq.) to ensure accessibility for handicapped individuals. (The *Americans with Disabilities Act* later extended similar protections to facilities of state and local governments and the private sector.) Specifically, federal agencies follow the regulations published as "*Architectural Barriers Act Accessibility Guidelines*" (36 CFR 1191 App. C). In addition, VA requires that its health care facilities follow the supplemental and more stringent "Barrier Free Design Guide" (VA 2011), which specifies greater accessibility related to the following:

- Ramp slope, length, clear width, and size of level landings where doors swing into landing.
- Handrail height.
- Elevator door width, car size. Double handrails required.
- Maximum window sill height in patient rooms.
- Minimum patient bedroom and toilet room entrance door width.
- Grab bar configurations in water closets and shower stalls.



- Minimum size for accessible and wheelchair front-transfer toilet stalls and shower stalls.
- Grab bars required in all (not just accessible) toilet stalls.
- Higher knee clearance for a percent of cafeteria tables.
- Lower cutlery and supply height in cafeterias.
- 100 percent of patient bedrooms and toilet rooms are accessible (compared to 10 percent).

The facilities at Hot Springs were constructed as early as 1907 and would need significant renovation to meet the ABA guidelines and VA's Barrier Free Design Guide. The 2015 Facility Condition Assessment of the Hot Springs Campus (VA 2015b) identified 15 conditions specifically related to accessibility, as listed in Table 1-3. The estimated total repair cost for only those conditions identified as accessibility deficiencies was estimated at \$15,218,115. The assessment also listed many more repair and maintenance requirements at substantial additional costs to correct (see Chapter 2 for detailed information on estimated costs by alternative).

The 2015 Facility Condition Assessment for Hot Springs identified an additional \$33,972,546 required to correct deficiencies in the architectural, electrical, mechanical, plumbing, steam generation/distribution, structural, transport, information technology, and hazardous materials (asbestos) systems of the campus buildings; and site work relating to parking lots, roads, and other items. The total cost to address all facility condition deficiencies at Hot Springs was estimated to be \$49,190,661 (VA 2015b).

Table 1-3. Accessibility Issues at Hot Springs VA Medical Center (2015).

Cost	Building Number	Building Name (current use)	Accessibility Issue
\$62,325.00	10	Catholic Chapel, Electric Room	Rework ramps to provide accessible route. Replace door knobs with lever hardware along accessible routes. Renovate public and staff toilets to comply.
\$18,697.00	11	Auditorium, Library	Small diameter (1-inch) handrails at connector do not meet criteria and should be replaced.
\$987,222.00	12	Hospital	Many public and staff toilets do not comply or partially comply. Accessible toilets are limited to Ground and 1st Floor but not on the upper floors. Remodel to provide accessible facilities where required. Replace door knobs with lever hardware along accessible routes (approx 25 percent of doors).
\$8,414.00	14	Facilities Management, MAS	Interior accessible routes and public and staff toilets on Floor 1 partially comply. Floor 2 Offices not accessible (less than 2,000 sf, no action recommended). Replace door knobs with lever hardware on Floor 1. Install lever faucets and grab bars at Floor 1 toilet.
\$560,922.00	2	Dom Kitchen, EMS	Renovate public and staff toilets. Replace door knobs with lever hardware along accessible routes.
\$137,114.00	20	Day Care/Quarters	Exterior entrances, interior accessible routes and stairs, and toilets partially comply with criteria. Ground Floor: accessible from rear. Construct ramps and landings for accessible entries to Floor 1. Renovate at least one (1) toilet for accessibility on Floor 1. Replace door knobs with lever handles along accessible routes.
\$249,298.00	21	Apartments	Exterior entrances and interior accessible routes and stairs do not comply with criteria. Replace door knobs with lever hardware along accessible routes. Provide ramps to Ground and Floor 1. Renovate at least one (1) Apartment Unit for accessibility.
\$2,056,713.00	3	Dom Quarters, AMMS, Fiscal	* Interior accessible routes and ramps, public and staff toilets, Domiciliary resident rooms, toilets and bathing facilities do not comply with criteria. Renovate resident rooms, toilets and bathing facilities to meet accessibility criteria. Ramps from Arcade are up to 1:6 slope. Rework ramp from B to C Levels. Install elevator to provide access to all floors. * Replace door knobs with lever hardware throughout.
			* Interior accessible routes and ramps do not comply. Ramps from Arcade are up to 1:6 slope. Rework ramp from B to C Levels and install elevator to provide access to all floors. * A Level Domiciliary resident rooms and A and B Level resident toilets and bathing facilities do not comply. Renovate resident rooms toilets and bathing facilities to meet accessibility criteria. C Level public and staff toilets do not comply and should be renovated.
\$2,461,823.00	5	Dom Quarters, Canteen	* Replace door knobs with lever hardware on approx 50 percent of all doors.
\$24,930.00	53	Nutrition Food Svc, Eye, Podiatry	Public and staff toilets partially comply; remodel toilets and showers to meet criteria. Replace door knobs with lever hardware along accessible routes. (Basement toilets and locker costs included with Interior Finish/Door)
\$2,337,173.00	6	Dom Quarters, Warehouse	* Interior accessible routes and ramps do not comply. Ramps from Arcade are up to 1:6 slope. Rework ramp from B to C Levels and install elevator to provide access to all floors. * Domiciliary resident rooms and toilets and bathing facilities do not comply. Renovate resident rooms toilets and bathing facilities to meet accessibility criteria.
\$31,162.00	66	Fire & Security	* Replace door knobs with lever hardware throughout building. Replace door knobs with lever hardware. Renovate public (office) toilet to meet criteria.
\$3,116,231.00	7	Dom Quarters, Arts & Crafts	* Interior accessible routes and ramps do not comply. Ramps from Arcade are up to 1:6 slope. Rework ramp from B to C Levels, and install elevator to provide access to all floors. * Domiciliary resident rooms, and toilets and bathing facilities do not comply. Renovate resident rooms, toilets and bathing facilities to meet accessibility criteria.
			* Replace door knobs with lever hardware throughout.
\$3,116,231.00	8	Dom Quarters, Recreation	* Interior accessible routes and ramps do not comply. Ramps from Arcade are up to 1:6 slope. Rework ramp from B to C Levels, and install elevator to provide access to all floors. * Replace door knobs with lever hardware throughout.
			* Domiciliary resident rooms, and toilets and bathing facilities do not comply. Renovate resident rooms, toilets and bathing facilities to meet accessibility criteria.
\$49,860.00	9	Protestant Chapel	Rework ramps to provide accessible route. Replace door knobs with lever hardware along accessible routes. Renovate public and staff toilets to comply.
<b>\$15,218,115.00</b>	<b>TOTAL</b>		

A separate study, “Analysis of VA Cost Options for VA Facilities with Status Quo Option; Updated with Input from Historic Architect” (Jones Lang LaSalle 2012a) reported the following (Table 1-4) overall costs of needed renovations and continuing operations at the Hot Springs Campus:

**Table 1-4. 30-Year Costs of Renovations and Continuing Operations at Hot Springs Campus:**

Item	Cost <sup>1</sup>
Non-recurring (renovation and other capital investment) life cycle costs	\$63,184,331
Recurring life cycle operating costs:	\$140,797,070
<b>Total</b>	<b>\$203,981,401</b>

<sup>1</sup> In 2012 dollars.

### 1.2.2.3 Limited Ability to Meet Current VA Standards for Residential Treatment

The facility requirements outlined in the VA Design Guide PG-18-12, Mental Health, are based upon the VA Office of Mental Health Services operating principles. These principles emphasize residential rather than institutional-like settings and include the ability to accept single Veterans with children. The residential setting should help Veterans improve their life skills and be complemented by access to jobs, long-term housing, education, and social services agencies.

#### *Single Parent Veterans*

Eleven percent of women service members are single parents, compared with four percent of men (Disabled American Veterans (DAV) 2014). The American Legion (n.d.) has published statistics identifying this emerging issue:

*Women who are separating from service are 3.6 times more likely to become homeless than their non-military counterparts. A very disturbing fall out from the war is that, according to the National Coalition for Homeless Veterans . . . , 9 percent of the homeless veterans of the War on Terror are women. There is also an increase in the number of homeless women veterans who have children.*

Disabled American Veterans (DAV) published an in-depth analysis (DAV 2014) of challenges faced by female veterans; key statements include the following:

- On average, women are younger than men who use the VA health care system and many new Veterans are of childbearing age. . . . This changing demographic has also meant that there has been increasing demand for on-site drop-in child care for Veteran parents using VA medical and social support services.
- Key Recommendation 5: VA should establish child care services as a permanent program to support health care, vocational rehabilitation, education and supported employment services.
- VA’s efforts to eliminate veterans’ homelessness have been impressive and are showing measurable success. However, women Veterans still have higher rates of homelessness than their non-veteran counterparts and housing support needs to be enhanced, particularly for women with dependent children.

- Key Recommendation 25 and related recommendation under Shelter: VA and [the Department of Housing and Urban Development] should invest in additional safe transitional and supportive beds designated for women Veterans, including homeless women Veterans, especially those with children.
- Key Recommendation 26: VA should work with community partners to provide housing programs to accommodate women Veterans with families.

The need for VA to ensure that new or renovated health care and residential facilities can accommodate single-parent Veterans has been recognized by VA BHHCS, although VA does not currently have a formal policy or statement identifying this as an agency goal or priority. VA BHHCS intends to improve support for single parent Veterans, particularly for the residential services available.

### ***Layout of Hot Springs Domiciliary***

The current Hot Springs Campus domiciliary layout, including open-bay sleeping and communal bathrooms, does not meet current VA standards for delivery of health care.

VHA Handbook 1162.02, “Mental Health Residential Rehabilitation Treatment Program (MH RRTP),” establishes the procedures for VA’s RRTP level of care. The existing domiciliary layout is not consistent with one item within this standard, which, states the Facility Director must, among other requirements, “ensure the environment is designed to promote an individual sense of well-being, optimism, and integration with the surrounding community (as opposed to a hospital- or dormitory-like dwelling).” [VHA Handbook 1162.02]

The VA “Mental Health Facilities Design Guide” (VA 2010b) provides further technical, architectural, and engineering specifications; and “emphasizes principles, and strategies for building state-of-the-art, recovery-oriented environments” for VA mental health settings. The existing configuration of the residential facilities at the Hot Springs Campus does not fully meet that guidance for the issues listed in Table 1-5.

**Table 1-5. Hot Springs Campus Deficiencies – Design of Mental Health Facilities.**

<b>VA “Mental Health Facilities Design Guide” Principal or Criteria</b>	<b>Hot Springs Campus Description</b>
<p>Principle #1: Mental health services should be recovery-oriented</p> <ul style="list-style-type: none"> <li>• Patient and family-centered</li> <li>• Rehabilitation/recovery-focused</li> <li>• Evidence-based</li> <li>• Emphasis on community reintegration</li> </ul>	<p>No accommodations for single-parent Veterans.</p> <p>Small town setting offers limited opportunities for employment, housing, and permanent re-integration.</p>

VA “Mental Health Facilities Design Guide” Principal or Criteria	Hot Springs Campus Description
<p>Principle #2: Mental health services should be provided in a therapeutically enriching environment</p> <ul style="list-style-type: none"> <li>• Home-like</li> <li>• Familiarity</li> <li>• Visual and physical access to nature to promote healing</li> <li>• Patient autonomy, respect, and privacy</li> </ul>	<p>The existing domiciliary is an institutional (dormitory or hospital-like) setting.</p> <p>Patient autonomy and privacy are constrained by partial bedroom walls and shower-curtain doors, and the unit-wide restroom, shower, laundry, and kitchenette facilities.</p>
<p>Principle #5: Mental health services should be provided in settings that respect and can accommodate a diverse range of patient populations and care needs</p> <ul style="list-style-type: none"> <li>• Provide appropriate accommodations for specific patient groups</li> <li>• Promote safety, privacy, and dignity of female Veterans</li> <li>• Provide separation within inpatient units or provide distinct units, where necessary</li> </ul>	<p>Patient privacy is constrained in most living quarters by partial-height bedroom walls and shower-curtain doors, and the unit-wide restroom and shower facilities.</p>
<p>Key design concepts for RRTPs (Chapter 3 of Guide) include independent living:</p> <ul style="list-style-type: none"> <li>• Resident rooms within a MH RRTP facility should be residential in character.</li> <li>• The multiple occupancy living units accommodates living, dining and limited kitchen facilities shared by up to four residents. The goal of this space is to replicate an independent living setting including simple meal preparation.</li> </ul>	<p>Resident rooms are institutional in character.</p> <p>Living, dining, limited kitchen, laundry facilities are shared by 8 to 16 residents.</p>

### ***Recovery Model of Care***

As noted in Table 1-5, Principle #1, the current domiciliary’s location in Hot Springs, which houses the RRTP, offers limited opportunities for employment, housing and permanent reintegration and, as such, it is not consistent with the “recovery” model of care.

The setting of an RRTP should help Veterans improve their life skills and be complemented by access to jobs, public transportation, long-term housing, education, acceptable activities/diversion, and other social services agencies. Location in a more urban city, such as nearby Rapid City, would offer a greater depth of community services, public transportation, more housing choices and capacity, a wider range of employment and educational opportunities, and a more robust clinically skilled labor force to support recovery.

VA has extensive experience with the community reintegration aspects of residential treatment in both rural and urban settings across the country; and VA BHHCS has been conducting its own research and compiling data gathered from facilities across the country with respect to the role that

location plays in successful reintegration, Some of the challenges identified in a rural setting are summarized below and support VA's position that Veteran reintegration is more difficult in a rural setting (Olmer 2016):

- Public transportation is very limited. Many residents don't have cars so getting to job interviews, finding apartment/housing and accessing community services is difficult.
  - Limited public transportation services available in Hot Springs.
- Housing is very limited and often difficult to find. Often there are no HUD/VASH vouchers available in the area. Therefore, only those Veterans with some form of income are successful at obtaining local housing.
- Opportunities for work re-engagement are hindered. There are limited employment opportunities; unless the Veteran is hired by VA.
- Discharge planning can be extremely challenging for those with a history of homelessness, co-occurring mental health disorders that impact independence, and lack of income. This results in extended length of stays for those Veterans.
- The larger open area campuses within a rural setting can be more difficult to monitor.

There are many programs throughout the U.S. today that target Veteran reintegration, including the Homeless Veterans Reintegration Program (HVRP) run by VA as well as the Department of Labor. The Department of Labor's HVRPs are currently set up in various cities over half a dozen states - from medium sized (Ann Arbor, MI) to large (Chicago) - to ensure that Veterans receive the necessary training and employment services/job opportunities, as well as the essential support services including housing and transportation assistance (Volunteers of America 2016). The National Coalition for Homeless Veterans (NCHV), in partnership with the U.S. Department of Labor - Veterans' Employment and Training Service (DOL-VETS) developed profiles of some of the nation's most effective homeless veteran employment assistance programs (Best Practice Profiles) (Department of Labor 2016). The purpose of the study was to inform community-based organizations and government agencies about the essential components of a comprehensive program that can be replicated and successfully compete for federal grants. While the study sought to include representative programs from both urban and rural areas, the successful profiles all include larger cities. Though the locations, structure and populations varied widely, there were several critical components to success that are shared by all HVRP employment assistance programs. These include:

- community collaboration designed to serve Veterans facing a multitude of barriers (e.g., transitional housing, transportation assistance, personal development counseling, legal aid, employment readiness and placement services);
- available support services and linkages with employers offering job opportunities for special needs population, national volunteer organizations (provide public assistance), state vocational rehabilitation and employment services offices; employment counseling, job preparation workshops, classroom training, employment resources.

Housing and employment were found to be key to success based on successful profiles which offered: job development, job search, labor market information, assisted placement, job workshops, resume preparation, interview skills training, transitional housing, and transportation assistance.



With respect to employment, a recent study published in the Psychiatric Rehabilitation Journal (Kukla et al., 2016) compared urban and rural supported employment programs with respect to employment barriers and facilitators for Veterans experiencing mental illnesses. The study included a national sample of VHA staff, supervisors and upper level managers. Results indicated that supported employment personnel from rural programs perceived significantly more barriers to work success compared with urban personnel, particularly in the areas of access to services and a range of job-related factors, including job match and interpersonal relationships at the work site. Qualitative findings further enhanced the quantitative findings and highlight challenges in rural supported employment programs affecting job development and job fit; although both urban and rural programs experienced unique barriers related to geography and transportation. The overall findings provide a comprehensive picture of the obstacles to employment success for Veterans living with mental illness and receiving supported employment services in rural areas. Examples of some of the educational and employment resources available in the Rapid City area include: University Center Rapid City (offers degrees from Black Hills State University, University of South Dakota, South Dakota State University); SD School of Mines & Technology in Rapid City also has a Veterans Resource Center (South Dakota School of Mines 2016) that offers tutoring in math and science, assistance with job and internships, resume writing, referrals, academic and life skills workshop; Western Dakota Technical Institute, National American University Rapid City; and Black Hills Beauty College.

Based on such findings and VA's own experience, an RRTP location in Hot Springs does not provide the higher quality of care and opportunities for successful reintegration into the community that VA believes is found in the more urban setting of Rapid City.

#### **1.2.2.4 Facility Costs Negatively Affect VA's Stewardship of Funds Appropriated for Veterans Health Care**

VISN 23 (Midwest Health Care Network) includes the following health care systems: Fargo, Iowa City, Minneapolis, Nebraska Western Iowa, Sioux Falls, St. Cloud, Black Hills, and Central Iowa. VISN 23's responsible stewardship of appropriated funds is affected by VA BHHCS's high operating costs: the VA BHHCS cost per unique patient is the highest among VISN 23 health care systems, many of which have facilities that offer more costly and more highly complex medical services compared to those available in VA BHHCS. Based on FY 2014 data, VA BHHCS's cost per unique patient (see text box) was approximately \$9,404 and was \$8,960 and \$8,958 in FY 2013 and FY 2012, respectively (2015c). The FY 2014 cost was approximately 22 percent higher than the next highest cost (VA Minneapolis Health Care System at \$7,713) and 23 to 65 percent higher than the other health care systems VISN-wide (whose costs per unique Veteran ranged from \$5,690 to \$7,670 in FY 2014 (VA 2015c).

A *unique patient* is counted as unique in each division from which they receive care. For example, if a patient receives primary care at one VA facility and specialty care from another VA facility, they will be counted as one unique patient in each.

A contributing factor to the relatively high costs within VA BHHCS, which was formed in 1996 through the merger of the Fort Meade and Hot Springs VA Medical Centers, is the increasing age and cost of operating, maintaining, and improving buildings that range from 40 to over 100 years old. VA BHHCS maintains 464,000 square feet and 77 acres of property at Hot Springs and 820,000 square feet and 220 acres at Fort Meade. Both of these campuses must maintain a full suite of site services (fire department, security, laboratory, nutrition and food, radiology, and others) serving a

total of more than 1.2 million square feet of space. Maintaining this costly infrastructure diverts financial resources from direct patient care. For example, the VA staffed police and fire protection units at Hot Springs alone requires over \$3.5 million annually for maintenance. The current Hot Springs Campus, although well maintained, also has inherent inefficiencies and inadequacies as discussed previously: the existing domiciliary buildings, which currently houses the RRTP, do not meet current patient-centered standards for patient privacy or the Architectural Barriers Act (ABA) and as such is not fully accessible to Veterans with physical handicaps. The inefficiencies in the VA BHHCS infrastructure, when combined with flat or declining workload, produce a relatively high cost per Veteran treated. The current primary care workload at Hot Springs is more comparable to that of an outpatient clinic in VISN 23. In fact, VISN 23 operated its other outpatient clinics - with a fraction of the infrastructure costs - that saw more Veterans in a primary care setting than the Hot Springs VA Campus.

As an executive branch agency, VA is subject to the provisions of the *Energy Policy Act of 2005* and the *Energy Independence and Security Act of 2007* that require federal agencies to achieve mandated energy and sustainability goals in new and existing buildings. Both acts define high-performance buildings as the integration and optimization on a life-cycle basis of all major high-performance attributes, including energy and water conservation, environment, safety, security, durability, accessibility, cost-benefit, productivity, sustainability, functionality, and operational consideration. The following excerpts from *Innovative 21<sup>st</sup> Century Building Environments for VA Health Care Delivery (Parts 1 and 2)* (VA 2009) concisely describe the basis for VA's direction toward providing services from modern new facilities compared to continued use of older, existing facilities:

- Transformation to 21<sup>st</sup> century care delivery presents . . . VA with critical challenges similar to those confronting private sector healthcare facility owners and operators. New healthcare facilities are subject to growing requirements for patient-centered care, increased productivity, reduced operating and maintenance expenses, enhanced energy and sustainability, higher disaster resistance, improved accessibility, and other societal objectives. Existing healthcare facilities can quickly become outdated as new medical practices and technologies emerge; older facilities are recognized as vulnerable to disasters and inaccessible to patients, caregivers, and other users. In addition, increasing operating costs in both new and existing buildings lead to deferred maintenance resulting in significant reductions in system performance.
- At the same time that energy and sustainability demands are forcing innovations in building design and operation, new care delivery methods and technologies are changing where, how, and by whom care is provided. The demand for higher performing facilities and the desire to provide world-class service to veterans and their families are driving VA to pursue new and innovative solutions for care delivery. VA's buildings have been and are being produced under conditions that are insufficient to support future care delivery and technology developments, and, in fact, can often constrain their implementation [emphasis added]. True high-performance buildings will support the VA healthcare delivery mission and goals for transformation to 21<sup>st</sup> century care.
- Changes in healthcare delivery are taking place more quickly than present healthcare facilities can adapt. The facility itself will constrain care if it cannot be changed to accommodate newer methods of care delivery. Responsive, effective design based on



optimized workflow has a strong impact on staffing required to deliver care as well as the quality of that care, resulting in a care model that delivers high quality outcomes for less costs and resource requirements than is the standard today. Future healthcare facilities should be designed with flexibility to accommodate growth and expansion and critical changes in clinical flow patterns.

### 1.2.2.5 Distribution of Veteran Population

Pennington County, SD, had the highest population of Veterans in the VA BHHCS in FY 2014 at 12,433. In comparison, Fall River County had a Veteran population of 1,013 in FY2014; Proximity to an individual's primary care provider is important. In FY 2014, 16,876 Veterans were receiving primary care through the VA BHHCS, with the majority going to Fort Meade, followed by Rapid City, Hot Springs, Pierre, and other sites. Figure 1-2 illustrates the proportion of patients receiving primary care from each source (Email message from L. Epperson, VA BHHCS, to C. Modovsky, October 29, 2014).

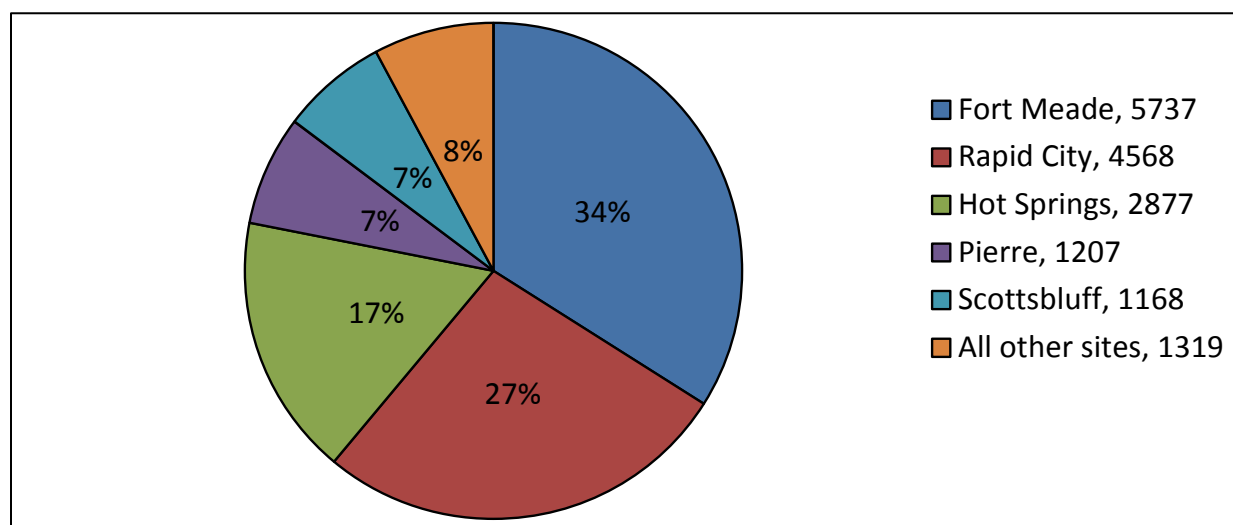


Figure 1-2. Patients Receiving Primary Care by Location, FY 2014.

In terms of where the Veterans live, population data show that, for FY 2012 through FY 2013, VA BHHCS health care facilities served 983 unique patients residing in Fall River County (where the Hot Springs Campus is located), compared to 5,928 unique patients from Pennington County (where the Rapid City CBOC is located).

Total Veterans and enrollment for the VA BHHCS catchment area are projected to remain stable over the next 20 years, but with a shift toward more Veterans and enrollees in the existing higher population centers, including Pennington, Meade, and Lawrence Counties, SD, and Scotts Bluff County, NE. These population centers are all projected to increase in Veteran population and enrollment within the 20-year horizon. Other counties in the catchment area are projected to remain stable or slightly decline. VA data show the Veteran population in Pennington County rising the most, at 4.3% to nearly 13,000 in 2030, and the Veteran population in Hot Springs declining the most, at 12.9%, to just under 900 Veterans, in 2030 (VA 2015a).

As discussed in Section 1.1.5, Hot Springs Campus has insufficient patient volume to support services or specialty care (including surgeries) in addition to those consistent with its designation as a basic level ambulatory surgical facility; and even some of the services currently provided are not adequately supported,

Exhibit 1 on the following pages provides a recent snapshot for the number and residences of Veterans served by VA BHHCS and the patient care encounters that have occurred, particularly at the VA Hot Springs facility.

## Exhibit 1

### Discussion: Locations of Veterans and Services

VA BHHCS provides health care services to Veterans primarily from the states that the service area covers (South Dakota, Nebraska, and Wyoming) but also to Veterans from a number of other states outside the service area. The table below shows the number of Veterans by their location of residence who had been served by the VA BHHCS between FY 2012 and FY 2014. Of the 22,334 Veterans served over the past three years, approximately 74 percent (16,470) were from the 34 counties that comprise the VA BHHCS service area. South Dakota represents the largest concentration of Veterans (inside and outside the service area) served by VA BHHCS. Veterans from 41 different states and territories received service, with Colorado and North Dakota the residence of the largest number of Veterans outside the service area at 592 and 528, respectively.

#### Number and Residence of Veterans Served by VA BHHCS, FY 2012-2014.

Veteran Residence Location	Number of Veterans Served		
	2012	2013	2014
<b><i>Within VA BHHCS Service Area</i></b>			
South Dakota	11,740	11,830	12,090
Fall River County	946	945	940
Pennington County	5,019	5,045	5,248
Lawrence County	1127	1157	1187
Meade County	1390	1429	1451
Nebraska	2,361	2,344	2,341
Scottsbluff County	932	926	915
Wyoming	518	503	524
Subtotal	14,619	14,677	14,955
<b><i>Outside VA BHHCS Service Area</i></b>			
South Dakota	1296	1231	1172
Colorado	302	324	313
North Dakota	425	389	413
Wyoming	336	351	333
Nebraska	334	333	293
Montana	227	211	227
Other States/Territories	1578	1512	1256
Subtotal	4,498	4351	4007
Total	19,117	19,028	18,962

Source: VA 2016a.

## Exhibit 1

### Discussion: Locations of Veterans and Services (continued)

One way that VA tracks health care services is by patient care encounters (PCEs). A PCE is a contact between patient and a provider who has primary responsibility for assessing and treating the patient during an appointment, by telephone, or as a walk-in. A patient may have multiple PCEs for one appointment or during a single visit to a VA facility.

The following table lists the number of PCEs at each VA BHHCS facility for FY 2014, along with the number of patients (Veterans) that generated the PCEs. One Veteran can have multiple PCEs at more than one facility; however, each Veteran is counted only once in the patient totals for each facility regardless of the number of visits or PCEs recorded for the Veteran at that facility. As shown in the table, there were 362,272 PCEs by 32,851 patients at 13 VA BHHCS facilities during FY 2014. The majority (52.1 percent) of all PCEs occurred at the Fort Meade facility and 34.1 percent occurred at the Hot Springs facility.

#### Patient Care Encounters at VA BHHCS Facilities, FY 2014.

VA BHHCS Facility Location	Patient Care Encounters	Percent Total
Fort Meade	188,571	52.1%
Hot Springs	123,589	34.1%
Rapid City	33,914	9.4%
Scottsbluff	5,925	1.6%
Pierre	4,340	1.2%
Winner	1,833	0.5%
Eagle Butte	1,772	0.5%
Pine Ridge	876	0.2%
McLaughlin	436	0.1%
Gordon	422	0.1%
Mission	325	0.1%
Newcastle	193	0.1%
Total	362,272	100%

Source: VA 2015e, 2015f.

## Exhibit 1

### Discussion: Locations of Veterans and Services (continued)

In addition to the 362,272 PCEs (65.7 percent) that occurred at VA BHHCS facilities, another 189,254 encounters (34.3 percent) occurred at non-VA facilities for a total 551,526 encounters during FY 2014 (VA 2015e). The encounters at non-VA facilities are recorded into broad categories. The categories that accounted for almost two-thirds of the total encounters in FY 2014 included:

- Evaluation and management (emergency room, critical care, inpatient) – 20,388
- Medicine (physical therapy, acupuncture, chiropractic care, cardiovascular, ophthalmology) – 46,466
- Pathology and laboratory – 19,761
- Radiology and nuclear medicine – 18,182
- Surgery – 17,472

The table below shows the PCEs that occurred at the VA Hot Springs facility during FY 2014 by the locations of the Veterans' residence. Veterans residing within the VA BHHCS service area accounted for 72.1 percent of the total PCEs (123,589). Veterans from other states outside the three-state area of South Dakota, Nebraska, and Wyoming accounted for more than 20.8 percent of the total PCEs.

#### Patient Care Encounters at VA Hot Springs Facility by Veterans Residence, FY 2014.

Veteran Residence Location	Patient Care Encounters	Percent Location Total	Percent Facility Total
<b><i>Within VA BHHCS Service Area</i></b>			
Fall River County, SD	31,727	35.6%	25.7%
Pennington County, SD	12,047	13.5%	9.7%
Other South Dakota counties	25,154	28.2%	20.4%
Nebraska counties	17,307	19.4%	14.0%
Wyoming counties	2,848	3.2%	2.3%
<b>Location Total</b>	<b>89,083</b>	<b>100%</b>	<b>72.1%</b>
<b><i>Outside VA BHHCS Service Area</i></b>			
South Dakota	3,571	10.3%	2.9%
Nebraska	2,652	7.7%	2.1%
Wyoming	2,520	7.3%	2.0%
Other states	25,763	74.6%	20.8%
<b>Location Total</b>	<b>34,506</b>	<b>100%</b>	<b>27.9%</b>
<b>Hot Springs Facility Total</b>	<b>123,589</b>	<b>100%</b>	<b>100%</b>

Source: VA 2015e.

## Exhibit 1

### Discussion: Locations of Veterans and Services (continued)

The PCEs completed at the Hot Springs facility (123,589) in FY 2014, which averaged to about 340 PCEs per calendar day, were further evaluated to understand the specific types of services and encounters that occurred most often. As shown below, encounters related to the RRTP (41,827) represented 33.7 percent of the total. Telephone encounters, which include 16 sub-categories, represented the next largest number of PCEs at 15,006 or 12.0 percent of the total.

#### Types of Patient Care Encounters at VA Hot Springs Facility, FY 2014.

Type of Encounter	Total	Percent Total
All RRTP	41,827	33.7%
All telephone	15,006	12.0%
Respiratory therapy	8,249	6.7%
All outpatient primary care	8,121	6.5%
Clinical pharmacy	6,189	5.0%
All mental health	4,410	3.5%
Urgent care unit	3,697	2.9%
X-ray	3,691	2.9%
Assisted hemodialysis	3,157	2.6%
Optometry	2,270	1.6%
Physical therapy	2,268	1.6%
Dental	2,089	1.6%
Home telehealth non-video monitoring	2,026	1.6%
All nutrition	1,904	1.5%
Electrocardiogram	1,662	1.5%
Dermatology	1,541	1.2%
Podiatry	1,355	1.2%
Computerized tomography	1,011	0.9%
All home-based primary care	1,010	0.9%
Social work service	972	0.9%
All others	11,134	9.1%
Total	123,589	100%

Source: VA 2015e.

## Exhibit 1

### Discussion: Locations of Veterans and Services (continued)

The greatest number of patient encounters is associated with the RRTP since it is a residential treatment program requiring longer term care and daily multiple interactions with medical staff on an individual and group basis. In terms of where RRTP patients reside, these Veterans come from all over the United States, with just over 40 percent living within the BHHCS service area and approximately 25 percent of the total residing in Fall River and Pennington Counties, South Dakota.

#### Hot Springs RRTP - Unique Patient Place of Residence, FY 2012-2015

Veteran Residence Location	2012	2013	2014	2015
<b><i>Within VA BHHCS Service Area</i></b>				
Fall River County, SD	40	42	42	53
Pennington County, SD	65	45	46	53
Other South Dakota counties (largest numbers in Shannon, Lawrence and Meade)	56	57	64	54
Nebraska counties	9	7	10	12
Wyoming counties	1	3	1	2
<b>Location Total</b>	<b>171 (44%)</b>	<b>154 (44%)</b>	<b>163 (43%)</b>	<b>174 (42%)</b>
<b><i>Outside VA BHHCS Service Area</i></b>				
South Dakota	24	12	17	15
Nebraska	9	17	13	11
Wyoming	10	10	14	13
North Dakota	17	15	16	21
Colorado	70	81	73	100
Montana	37	24	39	35
All Other States: (AZ, CA, FL, IA, MA, ME, MI, MN, NC, NV, OH, OK, OR, TX, UT, VA, WA)	46	36	41	44
<b>Total</b>	<b>384</b>	<b>349</b>	<b>376</b>	<b>413</b>

Source: VA 2016b.

VA BHHCS provides health care services to Veterans primarily from the states that the service area covers (South Dakota, Nebraska, and Wyoming) but also to Veterans from a number of other states outside the service area. The table below shows the number of Veterans by their location of residence who had been served by the VA BHHCS between FY 2012 and FY 2014. Of the 22,334 Veterans served over the past three years, approximately 74 percent (16,470) were from the 34 counties that comprise the VA BHHCS service area. South Dakota represents the largest concentration of Veterans (inside and outside the service area) served by VA BHHCS. Veterans from 41 different states and territories received service, with Colorado and North Dakota the residence of the largest number of Veterans outside the service area at 592 and 528, respectively.

The greatest number of patient encounters is associated with the RRTP since it is a residential treatment program requiring longer term care and daily multiple interactions with medical staff on an individual and group basis. In terms of where RRTP patients reside, these Veterans come from all over the United States, with just over 40 percent living within the BHHCS service area and approximately 25 percent of the total residing in Fall River and Pennington Counties, South Dakota.

### 1.2.2.6 Distance Veterans Must Travel for Care

Maintaining multiple VA providers of advanced care and specialty services in a rural health care system like VA BHHCS can be inconsistent with ensuring that Veterans have reasonable distances to travel to receive care. This is because VA would not be able to both support the costs of maintaining a specialty in-house and pay outside providers for the same specialty services. Table 1-6 lists VA guidelines for driving time.

**Table 1-6. VA Driving Time Guidelines.**

Level of Care	Driving Time (minutes)*			Threshold Criteria
	Urban Setting	Rural Location	Highly Rural	
<b>Primary Care</b> Main health care provider seen on regular basis; first, most generalized stop for symptoms.	30	30	60	70%
<b>Secondary Care</b> Care by someone with specific expertise in condition, generally by reference from primary care physician.	60	90	120	65%
<b>Tertiary Care</b> Hospitalized patient needing higher level of specialty care within the hospital; includes highly specialized equipment and surgery.	240	240	Within VISN	65%

Source: VA 2004.

\* The driving times guidelines shown are those that were in place when the Draft EIS was published. They have not yet been updated to reflect the recent change in methodology VA uses to define rurality (e.g., urban, rural, highly rural). Under the new methodology, the VA BHHCS is no longer designated as highly rural but rather as a rural service area.

There is a need to provide better geographic access (and reduce driving times) to health care facilities for Veterans living in the rural catchment area. By VA standards, driving times for VA BHHCS Veterans now are too long, especially to reach secondary health care facilities. Secondary/specialty care is currently provided at the Hot Springs Campus (limited) and the Fort



Meade campus; VA tertiary care facilities are located in Denver, Omaha and Minneapolis. Scarce medical specialties are either not available or not accessible in the catchment area. Figure 1-3 shows current driving times for secondary care access.

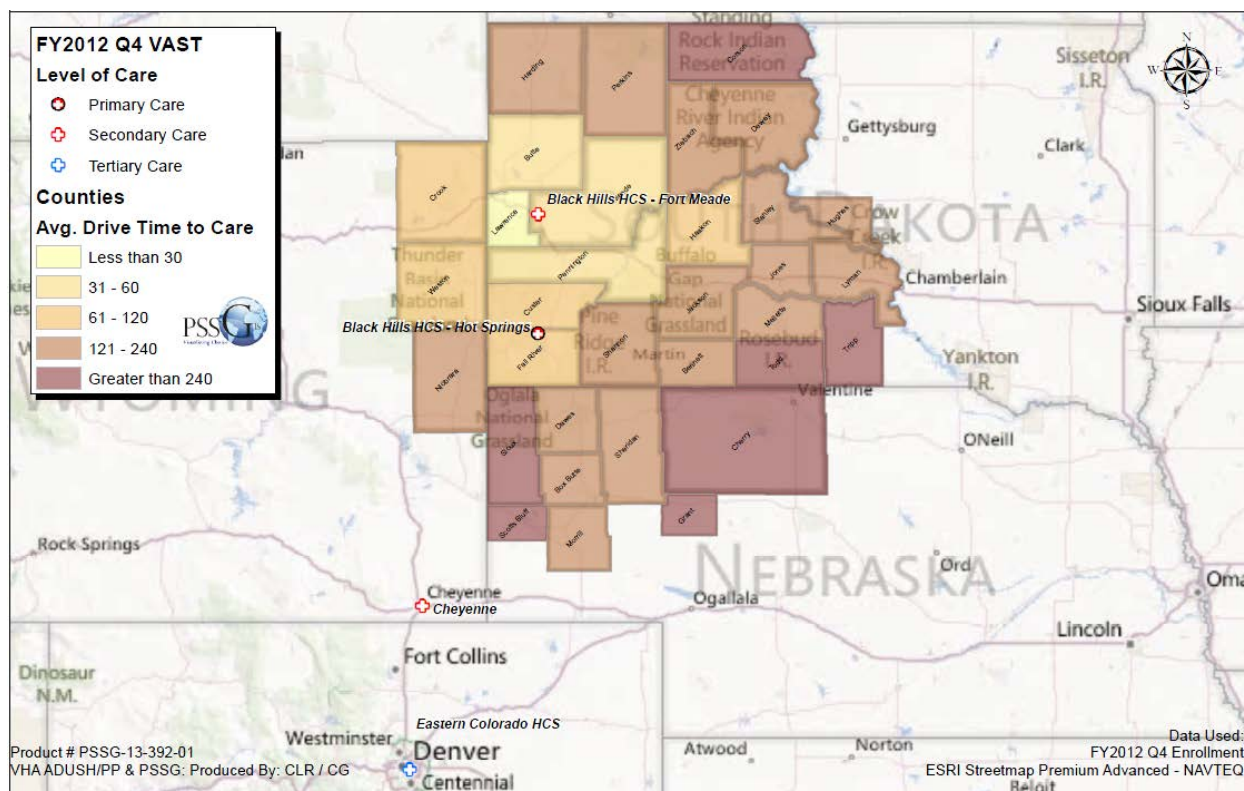


Figure 1-3. Driving Times for Secondary Care in VA BHHCS.

### 1.3 Scope of this EIS

The scope of the analysis in this EIS is evaluating the potential environmental impacts of alternatives that might meet the purpose of and need for the proposed reconfiguration of VA BHHCS. As required by NEPA, the potential environmental impacts of taking no action on the proposal are also evaluated.

This EIS analyzes impacts to the natural and built environment from the alternatives for changes to the physical facilities from which health care services are offered within the VA BHHCS catchment area. These physical facilities are owned or leased by VA. Constructing, leasing, renovating, re-using, re-purposing, or vacating one or more facilities to meet the stated purpose and need for reconfiguration is the focus of this EIS. VA BHHCS has invited public input to the NEPA process on the proposal and potential environmental impacts of the alternatives. The alternatives that involve vacating the existing Hot Springs Campus have attracted public attention and generated other alternatives offered by the public and considered by VA. The public's concerns related to potential impacts to historic resources and socioeconomic conditions are within the scope of this NEPA analysis and are evaluated in detail in this EIS.

It is beyond the scope of this EIS to determine the specific health care services that VA offers to Veterans at any location. These are decisions made by VHA's leaders, planners, and health care practitioners to further the VHA mission to "Honor America's Veterans by providing exceptional health care that improves their health and well-being." Each facility's medical services and associated support processes are monitored and adjusted based on VHA standards of care to ensure that Veterans and their families receive high-quality and safe care. These standards of care also ensure that, when needed, a patient is moved or referred to a facility that provides a higher level of care or a specialty service.

Although decisions about health care services are not within the scope of this EIS, decisions regarding appropriate physical buildings and infrastructure required to provide these services are the focus of this EIS and the NEPA process. For example, the number of patients receiving primary care determines the size of waiting rooms, number of exam rooms, size of the parking lot, and number of physician offices. Specialty services such as laboratories or operating rooms require spaces specifically designed for those purposes. Thus, while decisions on health care services offered are not subject to NEPA analysis, the scope of the NEPA decision does include changes to the facilities whose design is driven by VA's projections for services. The EIS often refers to the types of services needed wherever this information clarifies the need for a specific type of facility, new/changed facility, or size of a building.

In addition, the EIS includes information on alternatives for Veterans to receive some care that would be paid for by VA, at community or IHS clinics and hospitals. VA's decisions about reimbursing other providers of health care for Veterans, or the comparative quality or advisability of using other providers, is an important agency responsibility. Such decisions are not subject to an environmental impact analysis under NEPA; however, they are an important consideration in identifying where VA facilities should be located to adequately meet the needs of Veterans throughout the catchment area and are thus discussed where appropriate in this EIS.

Finally, for reasons noted previously in Section 1.1.2, neither the recent construction activities at the Fort Meade campus nor the new proposed VHA Pharmacy Call Center at the Hot Springs Campus are part of the proposed reconfiguration. Therefore, they are not addressed directly in this EIS other than as part of the cumulative impact assessment (see Sections 3.16 and 4.16). The impact on historic resources also includes Fort Meade in the Area of Potential Effect, consistent with agreements made with consulting party members as part of the NEPA/NHPA substitution process.

## 1.4 Integration of *National Historic Preservation Act* Section 106 Process

Section 106 of NHPA requires a federal agency to determine and consult on the effects of its undertaking on historic properties. The Hot Springs Campus occupies the buildings constructed in 1907 as part of the Battle Mountain Branch of the National Home for Disabled Volunteer Soldiers. The Battle Mountain Sanitarium was recognized as a National Historic Landmark in 2011 under Criterion 1 for its association with broad patterns of American History and Theme IV: *Shaping the Political Landscape*. Nearly all buildings, structures, objects, and landscapes in the Hot Springs Campus

are part of this historic district. The property also is a contributing element to the Hot Springs Historic District, a property listed in the National Register of Historic Places.

Section 106 review and consultation more often is carried out separately from the NEPA process. However, in the interest of efficiency, completeness, and facilitating public involvement, VA is substituting the implementation and review procedures of Section 102 of NEPA for consultation under Section 106 of the NHPA. This process meets the integration intent of the NEPA regulations (40 CFR 1500.2(c) and 1502.25(a)) and the substitution intent of the NHPA regulations (36 CFR 800.8(c)). Under the integrated substitution process, Section 106 review and consultation proceeds concurrently with the EIS process, and the EIS includes identification and evaluation of impacts to historic properties. This process follows the joint CEQ–ACHP guidance for integrating NEPA and Section 106 compliance (CEQ–ACHP 2013) to complete the following activities:

- **Initiate the process.** VA determined the undertaking, described in Chapter 2; notified the ACHP, the State Historic Preservation Office (SHPO), the National Park Service (NPS), as the steward of National Historic Landmarks (NHL) and Tribal Historic Preservation Officers of federally-recognized tribes with geographic or cultural ties to the Black Hills of VA’s intent to substitute the NEPA process for Section 106 purposes; identified tribes and other consulting parties to participate in the Section 106 process; and through extensive EIS scoping offered all interested stakeholders and members of the public mechanisms to obtain details of the undertaking as well as to provide input to the issues evaluated in the integrated NEPA/NHPA process. The agency coordination and public involvement activities, including Section 106 consultation, are described in Chapter 6.
- **Identification of historic properties.** Section 3.3 describes the Affected Environment for this NEPA analysis as it relates to cultural resources, including the area of potential effects and historic properties, as developed in consultation with consulting parties and public scoping input.
- **Assessment of adverse effects.** The potential effects of the alternatives to historic resources that are listed or eligible for listing on the National Register of Historic Places are evaluated in Section 4.3. Consultation with SHPO, ACHP, NPS, and other consulting parties and scoping input from the public was considered throughout this evaluation.
- **Resolution of adverse effects.** In consultation with SHPO, ACHP, NPS, and other consulting parties, VA developed mitigation measures to resolve adverse effects to historic properties. These are described in Section 4.3 and summarized in Chapter 5.
- **Objections to the process.** Four consulting parties formally objected to the use of the NEPA process as a substitute for consultation pursuant to Section 106 of the NHPA and VA’s implementation of the substitution process. In evaluating the objections, ACHP concluded that VA had met its obligations to identify historic properties affected by the undertaking. ACHP recommended additional action to clarify pieces of the administrative record, such as descriptions of the areas of potential effect (APE), an evaluation of the campus as a traditional cultural property (TCP), and an updated catalogue of VA’s tribal outreach efforts, among others. ACHP agreed with objecting parties that VA did not fully develop alternatives to resolve adverse effects following release of the draft EIS and the measures to resolve adverse effects proposed are “not commensurate with the magnitude of potential effects that would result to historic properties.” ACHP suggested that VA host

another meeting with the historic properties consulting parties to discuss these issues. A full copy of the ACHP letter is included in Appendix C. The regulations in 36 CFR §800.8(3) require federal agencies to consider the ACHP's opinion and respond. VA carefully considered ACHP's recommendations and responded to ACHP on October 26, 2016. A copy of this letter is in Appendix C. The measures to resolve adverse effects for the selected alternative will be included in the Record of Decision.

## 1.5 Relevant Statutes, Regulations, and Executive Orders

### *National Environmental Policy Act*

NEPA requires federal agencies to consider the potential impacts of projects, policies, programs, funding decisions and other agency actions on the environment. NEPA integrates environmental planning requirements into agency decision-making.

### *National Historic Preservation Act*

NHPA declared that it is the policy of the federal government to, among other goals, “Administer federally owned, administered, or controlled prehistoric and historic resources in a spirit of stewardship for the inspiration and benefit of present and future generations.” The most relevant provisions of the Act for this EIS are Sections 106 and 110.

Section 106 requires all federal agencies to review the effects of actions permitted or funded directly or indirectly by the federal government (“an undertaking”) on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places, and to take those effects into account as part of the assessment of the project. Federal agencies must also provide the ACHP the opportunity to comment on such undertakings. While such undertakings are often necessary to fulfill the mission of an agency, this section ensures that the agency considers cultural resources in the planning of such projects, and seeks to avoid, minimize, or mitigate adverse effects to the cultural resources in its decisions and agreements. The implementing regulations for the Section 106 process are provided at 36 CFR Part 800: Protection of Historic Properties.

Section 110 ensures that historic preservation is fully integrated into the ongoing programs of all federal agencies. Among its requirements are for each agency to establish a preservation program to identify, evaluate, nominate to the National Register, and protect historic properties; consult with other federal, state, and local agencies, tribes, and other parties on its historic preservation planning activities; and minimize harm from its undertakings to National Historic Landmarks. Section 110 states that “Prior to acquiring, constructing, or leasing buildings for purposes of carrying out agency responsibilities, each federal agency shall use, to the maximum extent feasible, historic properties available to the agency in accordance with Executive Order No. 13006.” This executive order is titled *Locating Federal Facilities on Historic Properties in our Nation's Central Cities*, and states “the Federal Government shall utilize and maintain, wherever operationally appropriate and economically prudent, historic properties and districts, especially those located in our central business areas.”

### *Council on Environmental Quality (CEQ) Regulations for Implementing NEPA*

The CEQ is a division of the Executive Office of the President that coordinates federal environmental policy by working closely with agencies and other executive offices. The Chair of CEQ acts as the top environmental policy advisor to the President. Congress established CEQ

through NEPA to ensure federal agencies meet their obligations under the Act. CEQ developed regulations for implementing NEPA (40 CFR Part 1500) and publishes guidance documents to assist agencies with compliance.

#### ***Executive Order 11593 – Protection and Enhancement of the Cultural Environment***

This executive order directs federal agencies to locate, inventory, and nominate properties under their jurisdiction or control to the National Register of Historic Places if they qualify.

#### ***Executive Order 11988 – Floodplain Management***

Federal agencies are required to avoid actions that adversely impact floodplains where there are practicable alternatives and to minimize environmental harm. Each federal agency must evaluate the potential effects of an action in a floodplain and ensure planning programs and budget requests consider flood hazards and floodplain management.

#### ***Executive Order 11990 – Protection of Wetlands***

Each federal agency must take action to minimize the destruction, loss, or degradation of wetlands and preserve and enhance the values of wetlands in carrying out agency responsibilities. An agency must follow this order when acquiring, managing, and disposing of federal lands and facilities; financing, constructing, or assisting in construction and improvements; and conducting federal activities and programs affecting land use. The order does not apply to permits, licenses, or other activities involving wetlands on non-federal property. Each agency must allow the public to review plans or proposals for new construction in wetlands early in the planning process.

#### ***Executive Order 12898 – Environmental Justice***

Executive Order 12898 directs each federal agency to make environmental justice part of its mission. A federal agency will identify and address the human health or environmental effects of its actions on minority and low-income populations.

#### ***Executive Order 13007 – Indian Sacred Sites***

Federal agencies are directed to accommodate access to and ceremonial use of American Indian sacred sites by their religious practitioners, and avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies are to maintain the confidentiality of sacred sites.

#### ***Executive Order 13175 – Consultation and Coordination with Indian Tribal Governments***

This order supplements the Executive Memorandum (dated April 29, 1994) entitled, “Government-to-Government Relations with Tribal Governments,” and states that each executive branch department and agency shall consult with tribal governments on, and assess the impacts of, federal plans, projects, programs, and activities that may affect tribal resources.

#### ***Executive Order 13287 – Preserve America***

Federal policy is established to advance the protection, enhancement, and contemporary use of the historic properties owned by the federal government and promotes intergovernmental cooperation and partnerships for the preservation and use of historic properties.



### ***Executive Order 13423 – Strengthening Federal Environmental, Energy, and Transportation Management***

This order instructs federal agencies to conduct their environmental, transportation, and energy-related activities in support of their respective missions in an environmentally, economically and fiscally sound, integrated, continuously improving, efficient, and sustainable manner.

### ***Executive Order 13693 – Planning for Federal Sustainability in the Next Decade***

This 2015 order sets policy and goals for federal agencies to maintain federal leadership in sustainability and greenhouse gas emission reductions. Through a combination of more efficient federal operations as detailed in the order, agencies are directed to reduce direct greenhouse gas emissions by at least 40 percent over the next decade while at the same time fostering innovation, reducing spending, and strengthening the communities in which federal facilities operate. The order also includes specific sustainability goals related to building energy conservation, efficiency, and management; using renewable and alternative sources for electrical energy, with specific goals for clean energy use by year; improving water use efficiency and management, including stormwater management; improving fleet and vehicle efficiency and management; use of recycled and sustainably produced materials; advancing waste prevention and pollution prevention; and promoting electronics stewardship.

Appendix A lists environmental permits potentially required to implement the project proposal.

## **1.6 Organization of this Environmental Impact Statement**

This EIS is organized in the format recommended by CEQ (40 CFR 1502.10) and includes:

- Cover Sheet, Executive Summary, Table of Contents, and Acronyms and Abbreviations.
- **Chapter 1: Introduction, including Purpose and Need** presents background information and the purpose and need for proposing to reconfigure the VA BHHCS health care services.
- **Chapter 2: Alternatives** describes each of the alternatives evaluated, including taking no action, and summarizes alternatives that were considered but not evaluated in detail.
- **Chapter 3: Affected Environment** describes the natural and human environment within the area that could be affected by the proposal.
- **Chapter 4: Environmental Consequences** is the assessment of the potential environmental impacts of the alternatives.
- **Chapter 5: Mitigation, Monitoring, Minimization, and Best Practices** discusses the measures identified to minimize or mitigate for the adverse impacts identified in Chapter 4.
- **Chapter 6: Public Involvement and Agency Coordination** summarizes the process to involve the public and the input received during the scoping process, integrated NHPA Section 106 consultation process, and, in the Final EIS, comments received on the Draft EIS. This chapter also summarizes coordination with federal, state, and local agencies.

- **Chapter 7: List of Preparers** provides the names, education, and experience of the individuals involved in the preparation of the EIS.
- **Chapter 8: References** lists the references cited in the EIS.
- **Chapter 9: Glossary** provides definitions of the technical terminology used in the EIS.
- **Appendices:**
  - A. Permits
  - B. Save the VA Proposal
  - C. NEPA/NHPA Substitution Process
  - D. Summary of Public Scoping
  - E. Draft EIS Comments and Responses

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## 2.0 ALTERNATIVES

The *National Environmental Policy Act* (NEPA) and the Council on Environmental Quality's (CEQ) and Department of Veterans Affairs (VA's) NEPA regulations require rigorous exploration and objective evaluation of all reasonable alternatives for implementing a proposal. This environmental impact statement (EIS) evaluates the potential environmental consequences of six alternatives including No Action, as well as a new hybrid of one alternative (A-2) and a supplement to four of the alternatives. This chapter describes the development of the alternatives, the details of the alternatives, and other alternatives identified but eliminated from detailed analysis.

### 2.1 Development of Alternatives

As early as 2006, VA Black Hills Health Care System (BHHCS) recognized that the issues described in Section 1.2 *Purpose of and Need for Reconfiguration of the BHHCS* would require changes to the health care system. VA BHHCS also recognized that they would need to do more than change the set of services offered from existing locations, and would have to consider changes to the actual facilities from which the health care system operates, including potential changes in facility locations. By 2011, VA BHHCS's internal analysis had coalesced around specific recommendations for reconfiguring services that involved changes to the facilities from which VA BHHCS operated. In July 2011, VA BHHCS presented the Secretary of VA with a preliminary option for a phased approach to (1) re-locating services from the VA-owned Hot Springs Campus and Rapid City community-based outpatient clinic (CBOC) leased space; (2) providing these services from a new Hot Springs CBOC, Rapid City multi-specialty outpatient clinic (MSOC), and Rapid City Residential Rehabilitation Treatment Program (RRTP); and (3) offering the Hot Springs Campus for an enhanced-use lease. The new Hot Springs CBOC would provide primary care, mental health, select outpatient specialty care services, and dialysis services. Inpatient, long-term care, surgical and urgent care services previously provided in Hot Springs would be discontinued and purchased from non-VA health care providers which, in most cases, would provide care closer to Veterans' residences. These features were incorporated into one of the alternatives analyzed in the EIS, Alternative A. At the Secretary's direction, VA BHHCS developed details of requirements, timelines, and compliance needs, and presented the reconfiguration proposal for public feedback at 15 public town hall meetings and eight VA employee meetings from December 2011 through June 2012. During this time, VA BHHCS leadership also met with local, state, and federal government officials; Veterans service organizations; representatives from private health care facilities; and community and tribal leaders. For the next two years, VA continued discussions with the community, identified and evaluated aspects of alternative approaches, and responded to inquiries.

VA identified a range of alternatives that offered varying combinations of new construction or leases for new health care facilities in Hot Springs and Rapid City, along with a supplemental alternative that would repurpose all or part of the exiting Hot Springs Campus and be used in conjunction with the other action alternatives. In addition, due to the widespread attention generated by VA's proposal to vacate the Hot Springs Campus, VA agreed to evaluate alternatives offered by the public, including renovating and re-using one or more buildings on the existing Hot Springs Campus.

The May 16, 2014, *Notice of Intent to Prepare an Integrated EIS* identified seven potential action alternatives and the no action alternative, described in the EIS as follows:

- Building/leasing a CBOC in Hot Springs and an MSOC/100-bed RRTP in Rapid City (Alternative A)
- Building/leasing a CBOC and 100-bed RRTP in Hot Springs and an MSOC in Rapid City (Alternative B)
- Renovating Building 12 for a CBOC and the domiciliary for a 100-bed RRTP at VA's existing Hot Springs Campus and building/leasing an MSOC in Rapid City (Alternative C)
- Building/leasing a CBOC and 24-bed RRTP in Hot Springs and an MSOC and 76-bed RRTP in Rapid City (Alternative D)
- The "Save the VA" proposal, which includes continuing and expanding health care services at the Hot Springs Campus (Alternative E)
- An as-yet unidentified alternative use that might be proposed during the EIS process
- A supplemental alternative to repurpose all or part of the Hot Springs Campus through an enhanced-use lease or other agreement with another governmental agency or private entity in conjunction with one of the other action alternatives (Alternative G)
- No action (Alternative F)

The EIS scoping process did not yield new action alternatives that were defined sufficiently for meaningful analysis, so the placeholder for an unidentified alternative was deleted. Commenters did offer specific suggestions for re-use of part or all of the campus by non-VA entities; these are captured within Supplemental Alternative G, which is described in Section 2.3.8.

During the public comment period on the Draft EIS, and in response to consulting party input as part of the NEPA/NHPA substitution process, a new CBOC location option was identified for the Hot Springs Campus under Alternative A. Referred to as Alternative A-2 (with Alternative A now being called Alternative A-1), this new variation includes renovating a portion of Building 12 on the existing Hot Springs medical campus to accommodate a new and updated CBOC, similar to that proposed in Alternative C. The RRTP would still be relocated to Rapid City, as proposed under the original Alternative A. Alternative A-2 would allow VA a continued presence on the Hot Springs Campus, although smaller than that proposed under Alternative C. Because Alternatives A and C, as evaluated in the Draft EIS, provide a bounding analysis for the potential impacts resulting from Alternative A-2 (i.e., A-2 would result in identical or smaller impacts depending on the location and resource), VA has determined that a supplemental analysis to the Draft EIS is not necessary. A description and evaluation of the new Alternative A-2 is included in this Final EIS.

This EIS evaluates the potential environmental impacts of alternatives for new facilities and changes to existing facilities; the need for changes to facilities is based on the need for changes in medical services to meet the purpose of and need for action. Actual changes to medical services provided by any VA facility, in the past, near term or future, are not subject to NEPA review. However, the proposed changes to the facilities result from the need to reconfigure services throughout the VA BHHCS catchment area. Scoping for this EIS identified the location of specific VA medical services as a topic of great interest and concern to the Veteran community.

## 2.2 Alternatives Overview and Service Components

The health care service offerings in Hot Springs and Rapid City associated with each alternative for new or renovated facilities are summarized in Table 2-1, where

**Secondary care** providers have specific expertise in a condition, generally by reference from primary care physician.  
**Tertiary care** is a higher level of specialty care within a hospital, including highly specialized equipment and surgery.

Alternative F represents what services are currently available to Veterans at the Hot Springs Campus – note that Supplemental Alternative G is not included in this table as it is not associated with reconfigured VA BHHCS health care services, but instead represents options for re-use of the current Hot Springs Campus); however, the health care services are not an inherent or unchangeable component of any alternative evaluated in this EIS. As shown in Table 2-1, under some of the alternatives, there are some services that have been provided for Veterans by VA BHHCS (e.g., inpatient, surgery, specialty care, urgent care), that would no longer be offered at a VA facility in Hot Springs, however, these services would be available locally through purchased care (care in the community program from non-VA community providers). Care in the Community has expanded since development and publication of the Draft EIS and will likely continue to change over time. Different regulatory authorities - containing eligibility criteria and other policies specifying when and how it can be used - now allow coverage for more services for eligible Veterans, and greater flexibility for Veterans in their choices to receive care in the community or through VA. Such authorities will ensure that the provision of non-VA care will continue under all alternatives. These authorities include: (1) Veterans Access, Choice and Accountability Act of 2014 which created and directed the Veterans Choice Program to improve access to care and meet the short-term health care needs of our Nation's Veterans ([www.va.gov/opa/choiceact](http://www.va.gov/opa/choiceact)); (2) VA's nationwide patient-centered community care (PC3) program, which has been expanded to include a larger network of health care providers to deliver covered care to Veterans, and implementation of the Veterans Choice Program; and (3) the VA BHHCS's Care in the Community (CITC) program for providing referrals or authorizations for service from non-VA community providers (billed to VA). PC3 provides eligible Veterans access to certain medical care when the local VA Medical facility cannot readily provide it due to lack of an available specialist, long wait times, geographic inaccessibility, or other factors. The funding that supports the Veterans Choice Program expires in 2017 and it is unknown whether the program will continue nationally. However, VA BHHCS would continue to provide a CITC Program into the future under all alternatives. Under the CITC Program, potentially hundreds of community providers could be available throughout the service area, including tertiary and secondary care providers, thereby allowing Veterans more options/choices of inpatient and outpatient healthcare services from community providers closer to where Veterans live. This would significantly improve geographic access to Veteran care within the catchment area and result in reduced Veteran driving times that would meet or greatly improve upon the driving time thresholds identified in Table 1.6-1 (i.e., to reach primary acute and tertiary hospitals within rural areas). Another benefit of the CITC program is that it includes individual Veteran care coordinated by VA BHHCS RN case managers. Veterans also always have the choice to receive care at a VA medical facility.

Table 2-1. Health Services by Location Associated with the EIS Alternatives.<sup>1</sup>

Service	Source					
	Alternatives A-1 and A-2	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
<i>Hot Springs Area</i>						
Primary care Dialysis Mental health Local Call Center	New CBOC (A-1) or Building 12 CBOC (A-2):	New CBOC:	CBOC in Building 12:	New CBOC:	Hot Springs Campus:	Hot Springs Campus:
Inpatient beds	Community	Community	Community	Community	Hot Springs Campus: 15 acute care beds 3 intensive care unit beds	Hot Springs Campus: 10 beds
Laboratory Pharmacy Urgent care	New CBOC (A-1) or Building 12 CBOC (A-2): Limited lab services + Community: pharmacy and urgent care	New CBOC Limited lab services + Community: pharmacy and urgent care	New CBOC in Building 12 Limited lab services + Community: pharmacy and urgent care	New CBOC Limited lab services) + Community: pharmacy and urgent care	Hot Springs Campus	Hot Springs Campus:
Surgery	Community	Community	Community	Community	Hot Springs Campus: Advanced outpatient surgery: General surgery: screening / diagnostic endoscopy (upper gastrointestinal system and colon exams) and similar complexity Specialty surgery: orthopedic, urologic, ophthalmic	Hot Springs Campus: basic outpatient procedures

Table 2-1. Health Services by Location Associated with the EIS Alternatives<sup>1</sup> (continued).

Service	Source					
	Alternative A (A-1 and A-2)	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Specialty care	New CBOC or Building 12 CBOC: expanded specialty care (not yet identified) + community	New CBOC: Limited specialty care (not yet identified) + community	CBOC (Building 12): expanded specialty care (not yet identified) + community	New CBOC: expanded specialty care (not yet identified) + community	Hot Springs Campus: expanded specialty care + community	Limited at Hot Springs Campus + community
Medical imaging	New CBOC or Building 12 CBOC: Mobile computed tomography (CT) and magnetic resonance imaging (MRI) + community	New CBOC: Mobile CT and MRI + community	Building 12 CBOC: Mobile CT and MRI + community	New CBOC: Mobile CT and MRI + community	Hot Springs Campus: <ul style="list-style-type: none"> <li>• Diagnostic radiology</li> <li>• Ultrasound (24/7)</li> <li>• Echocardiogram (24/7)</li> <li>• CT (24/7)</li> </ul>	Hot Springs Campus: X-ray and mobile imaging (e.g., CT scan or MRI)
Community living center (nursing home)	Community	Community	Community	Community	Hot Springs Campus: 15 beds	Hot Springs Campus (7 beds)

Table 2-1. Health Services by Location Associated with the EIS Alternatives<sup>1</sup> (continued).

Service	Source					
	Alternatives A-1 and A-2	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
RRTP	None in Hot Springs area	New 100-bed RRTP	100-bed RRTP in existing domiciliary	New 24-bed RRTP	Hot Springs domiciliary: <ul style="list-style-type: none"> <li>• 160 beds within existing Domiciliary and an additional 40 beds potentially reconfigured in other buildings on campus, including substance abuse, after care treatment , compensated work therapy (CWT)), care management , post-traumatic stress disorder (PTSD)</li> <li>• Integrated family counseling and onsite temporary accommodations for families who wish to participate in family therapy</li> <li>• Legal and benefits counseling</li> <li>• Virtual learning center, learning support, virtual and onsite classes, library</li> </ul>	Hot Springs domiciliary (100 beds) for homeless Veterans and mental health services for PTSD, substance abuse, alcohol abuse and other conditions.
<b>Rapid City Area</b>						
Primary care	New MSOC	New MSOC	New MSOC	New MSOC	New MSOC	Existing CBOC
Specialty care	Expanded at new MSOC	Expanded at new MSOC	Expanded at new MSOC	Expanded at new MSOC	Expanded at new MSOC	Limited at existing CBOC
Mental health	New MSOC	New MSOC	New MSOC	New MSOC	New MSOC	Existing CBOC
Pharmacy	New MSOC	New MSOC	New MSOC	New MSOC	New MSOC	None
Laboratory	New MSOC	New MSOC	New MSOC	New MSOC	New MSOC	Samples drawn at CBOC and sent to lab at Fort Meade
X-ray	New MSOC	New MSOC	New MSOC	New MSOC	New MSOC	None
RRTP	New 100-bed RRTP	None in Rapid City area	None in Rapid City area	New 76-bed RRTP	None	None

<sup>1</sup> Supplemental Alternative G is not included in this table as it is not associated with reconfigured VA BHHCS health care services, but instead represents options for re-use of the current Hot Springs Campus.

The proposed reconfiguration under Alternatives A (A-1 and A-2) through D also would expand the use of nurses as case management and care coordination resources for Veterans using Care in the Community. Such support would be telephonic or, in some cases, in person, and would include:

- patient assessment and education.
- referral and authorization, (e.g. ensuring timeliness of authorization and scheduling of appointment, and reasonable commuting distance)
- exchange of patient medical information / records with non-VA provider, patient follow-up (e.g., obtain patient feedback on quality of care and ability of non-VA provider to meet Veterans' needs).

Many public commenters were critical of the Veterans Choice Program and expressed concern about the delivery and quality of care Veterans would receive from community providers under the purchased care program in general. VA acknowledges there have been some challenges associated with implementing provisions of the Veterans Choice Program, which allocated \$15 billion to VA over a three year period, including \$10 billion to cover costs of Veteran care at non-VA providers; however, VA BHHCS has historically been successful in implementing and utilizing purchased care to supplement care for Veterans of VA BHHCS.

VA continues to recognize community care as a pillar for delivering quality health care to Veterans, especially in rural areas such as VA BHHCS, and is working hard to make community care easier to understand, administer and to proactively ensure personalized, patient-driven, health care for Veterans closer to where they live. Key to this effort is VA's direct role in managing the quality of care each Veteran patient receives, by coordinating and monitoring care, and facilitating the overall transition between VA and community providers as described above.

VA is responsible for case management and coordination of Veterans' Care in the Community. VA would also respond to specific complaints related to individual Veteran patient care as needed and appropriate

The focus on community care is consistent with national VA initiatives. VA will be starting a new Medical Community Care Program in the near future, as part of the 2017 Medical Community Care appropriations account required by the Surface Transportation and Veterans Health Care Choice Improvement Act of 2015 (P.L. 114-41).

In addition to obtaining services from the Hot Springs CBOC and Rapid City MSOC and community providers, Veterans may seek care from other VA locations (such as Fort Meade), receive prescriptions from a VA pharmacy by mail, and, for some health conditions, continue to take advantage of "telehealth." Telehealth uses a telecommunications link for real-time interaction between the patient and provider, or two providers. A patient can participate from a local VA health care facility, or in some cases from home, in a consultation or examination with a remote VA medical professional using closed-circuit television and devices that measure and transmit medical data.

Eligible Native American Veterans would have the choice, under all the alternatives, to use either a VA or IHS system for their care as a result of a national Memorandum of Understanding that has been established between VA and IHS. They would also still be able to receive primary care through the new CBOC in Hot Springs.



With respect to travel assistance, VA BHHCS offers transportation through the Veteran Transportation System (VTS) (e.g., the DAV and community Volunteer Transportation Network, government-owned vehicles, and VTS wheelchair-equipped vans) throughout the health care system to all Veterans with a VA-approved appointment without regard to beneficiary travel eligibility. Routine adjustments are made to the VTS transportation coverage, where appropriate, to respond to health care system needs. This would continue under all of the alternatives.

Figure 2-1 illustrates the major components of the six stand-alone alternatives evaluated in detail in this EIS. Supplemental Alternative G could be implemented in conjunction with Alternative A, B, C, or D. Alternative A has two location options (A-1 and A-2) for the Hot Springs CBOC.

There are four important aspects of this set of alternatives:

- Alternatives A (including A-1 and A-2) through D involve an expanded presence in the Rapid City area while maintaining locations in the Hot Springs area. There was a common misconception during scoping, also appearing in subsequent editorials and social media posts, that expansion in the Rapid City area meant that all services in the Hot Springs area would be discontinued. VA has clearly stated, and reiterates in this EIS, that **continuation of outpatient primary care services in the Hot Springs area (either at the current location or a new facility) is and always has been part of every alternative.**
- There has also been a misconception about VA's plans for a new hospital in Rapid City. This is not, and never has been, a plan to build a new hospital in Rapid City under this reconfiguration proposal. Closure of the hospital at the Hot Springs Campus under Alternatives A through D would result in additional choices for Veterans to receive care from a community provider. Fort Meade Campus would also remain an option.
- For the alternatives that include a new facility in the Hot Springs area or Rapid City area (A through D), **VA BHHCS has not yet identified any specific site on which to construct a new building or lease space for a new facility.** VA would follow departmental facility specifications, standards, and guidelines in any site selection, planning, design, and construction for a new CBOC, MSOC, or RRTP. These requirements include those that are available online for public access from the Technical Information Library of VA's Office of Construction & Facilities Management (CFM) ([www.cfm.va.gov/til/](http://www.cfm.va.gov/til/)). The general parameters of proposed new facilities are outlined under the alternatives descriptions that follow. If the characteristics of the proposed site(s) for a new facility in either Hot Springs or Rapid City could be associated with potential environmental impacts not evaluated in this EIS, additional NEPA review would be undertaken. An additional NEPA review would be triggered if a site specific location were found to have sensitive environmental resources on site that could be adversely affected from construction and operation (e.g., wetlands, threatened and endangered species/critical habitat, historic or cultural resources, such as an NRHP listed or eligible site(s)).

Location	Alternatives*					
	A		B	C	D	E
	A-1	A-2				
Hot Springs	CBOC New Location in Hot Springs	CBOC in Building 12 (renovation)	CBOC New Location in Hot Springs	CBOC in Building 12 (renovation)	CBOC New Location in Hot Springs	Expand inpatient services  Building 12 Renovation
			RRTP 100 beds New Location in Hot Springs	RRTP 100 beds Domiciliary (renovation)	RRTP 24 beds New Location in Hot Springs	RRTP 200 beds Domiciliary (renovation)
	Existing VA Campus		Existing VA Campus		Existing VA Campus	Other Upgrades / Renovations New programs & services
	Alternative G: Future re-use by VA or others of all/part of Hot Springs VA campus; supplement to Alternatives A–D. Would include “Medical Miracle” proposal.					
Rapid City	MSOC	MSOC	MSOC	MSOC	MSOC	MSOC
	RRTP 100 beds	RRTP 100 beds			RRTP 76 beds	
						CBOC (No Change)
*Section 106 consultation and Draft EIS public comments requested specific consideration of a Hot Springs CBOC location on the existing campus.				CBOC = Community Based Outpatient Clinic MSOC = Multi Specialty Outpatient Clinic RRTP = Residential Rehabilitation Treatment Program		

Figure 2-1. Alternatives.

- It is not within the scope of this EIS to determine the specific health care services that VA offers to Veterans at any location. Although decisions about health care services are not subject to NEPA review, decisions regarding appropriate physical buildings and infrastructure required to provide these services are the focus of this EIS and the NEPA process. Section 1.3 fully discusses this point.

Figure 3.3-12, in Section 3.3, provides a facility map of VA’s Hot Springs Campus that can be referenced when specific buildings are discussed.

## 2.3 Description of Alternatives

The following sections describe Alternatives A-1 and A-2 through F and Supplemental Alternative G, which were summarized in Figure 2-1.

### 2.3.1 Alternative A - Hot Springs CBOC, Rapid City MSOC and RRTP (including A-1 and A-2 variations)

Under the Alternative A-1 option, VA BHHCS would build or lease a CBOC in the Hot Springs area, build or lease an MSOC and 100-bed RRTP in the Rapid City area, and cease providing services from the existing Hot Springs Campus and Rapid City CBOC. The Alternative A-2 option

is identical to Alternative A-1 except VA would renovate Building 12 at the existing Hot Springs Campus as the location for a CBOC.

Both of the Alternative A variations fully meet the elements of purpose and need as described in Section 1.2. In addition to offering a new and updated CBOC in Hot Springs and a new MSOC in Rapid City, they offer expanded providers and services under the CITC (which help reduce travel distance and associated out-of-pocket expenses). They also offer an RRTP that fully meets the current VA standards for residential treatment with respect to VA's Mental Health Facilities Design Guide (VA 2010b); the proposed RRTP location in Rapid City is not only consistent with the VA mental health design guide's principle relating to community reintegration, but the more urban setting also offers a wider array of services that VA believes help improve the quality of care and provide greater opportunities for successful treatment and community reintegration (see related discussion in Section 1.2.2.3).

The subsections that follow address the physical facilities, employment, estimated cost, and timeline for Alternatives A-1 and A-2.

### **2.3.1.1 New Facilities**

#### ***Hot Springs CBOC- Alternative A-1 Option***

VA would construct or lease a building in the Hot Springs area to serve as a CBOC. The CBOC is estimated to require approximately five acres, with 16,711 square feet of building space and 100 parking spaces. The actual concept or design for the proposed Hot Springs CBOC is unknown, but Figure 2-2 illustrates modern CBOCs of similar size based on VA's current design guidelines and approaches. CFM provides detailed and extensive guidelines for all VA construction projects, which are available online at [www.cfm.va.gov/ti/index.asp](http://www.cfm.va.gov/ti/index.asp). VA has not identified a specific location for the proposed Hot Springs CBOC, although it would be expected to be within or near the city limits of Hot Springs.



Figure 2-2. New VA Outpatient Clinics Similar in Size to Proposed Hot Springs CBOC.

The proposed Hot Springs CBOC would either be constructed under contract to VA on land purchased by VA, or an existing building modified or new building constructed (“build to suit” arrangement) according to VA specifications by a developer who would enter into a long-term lease with VA.

Site selection criteria would include existing natural and built site features and improvements, public transportation access, location outside of a 100-year floodplain, availability of the property, cost of the property, and other factors identified in VA’s “Site Development Design Manual” (VA 2013b). VA would also comply with its “Strategic Sustainability Performance Plan” (VA 2014), and would consider the “Recommendations on Sustainable Siting for Federal Facilities” (DOT et al. 2010). Site selection also considers a location’s potential to achieve integration of the proposed facility into the surrounding environment, blending existing conditions and future facility requirements (low-impact development). The proposed facility’s “fit” within the existing property lines would be assessed, along with which orientation would provide the best energy reduction opportunities.

### ***Hot Springs CBOC - Alternative A-2 Option***

VA would renovate the existing hospital building (Building 12) for use as a CBOC on the Hot Springs Campus. The boiler plant (Building 18), high voltage switchgear building (Building 64), and information resources management building (Building 65) would also be renovated and remain in use. The CBOC is estimated to require 45,841 square feet within the 134,918-square-foot building.



### ***Rapid City MSOC and RRTP***

Under both A-1 and A-2 options, VA would construct or lease buildings in the Rapid City area, at a single location, to serve as an MSOC and RRTP. The co-located Rapid City MSOC and RRTP would require an estimated 132,942 to 144,956 square-foot facility with 620 parking spaces on approximately 14 to 17 acres.

The actual concept or design for the proposed Rapid City MSOC is unknown, but Figure 2-3 provides examples of modern VA outpatient clinics of similar size based on VA's current design guidelines and approaches.



Figure 2-3. New VA Outpatient Clinics Similar in Size to Proposed Rapid City MSOC.

The actual concept or design for the proposed Rapid City RRTP is unknown, but Figure 2-4 illustrates a modern RRTP based on VA's current design guidelines and approaches. It is likely to be a single- and multi-story apartment and townhouse setting, similar to the facility shown in Figure 2-4. The Veterans' residences would consist of patient care units, each with single and double rooms for up to four residents with shared living, kitchen, laundry, and bathroom space. The Rapid City RRTP would have a sweat lodge in a secluded location; a central patient dining area; and a common area for therapy, education, training, recreation, conference, and administration.



Figure 2-4. Example of Modern RRTP Layout

The proposed Rapid City MSOC and RRTP would either be constructed under contract to VA on land purchased by VA, or an existing building modified or new building constructed (build to suit arrangement) according to VA specifications by a developer who would enter into a long-term lease with VA.

VA has not identified a specific location for the proposed Rapid City MSOC and RRTP, although it would be expected to be within or near the city limits of Rapid City. General site selection criteria would be the same as those described above in the subsection *Hot Springs CBOC*.

#### **2.3.1.1.2 Vacated Facilities**

Under Alternative A-1, VA BHHCS would no longer offer health care services from the existing Hot Springs Campus. Under Alternative A-2, VA BHHCS would not have use for some portions of the hospital building (Building 12) and would therefore close areas of the building. The A-2 Alternative would close all other buildings not listed above (2.3.1.1.1) as being used for the CBOC or its supporting functions. VA BHHCS would no longer offer health care services from the existing Rapid City CBOC under Alternatives A-1 and A-2. Under both Alternatives A-1 and A-2, VA would consider various options for the Hot Springs Campus, most of which is a National Historic Landmark. Under Supplemental Alternative G, Re-Use by VA or Others, VA would evaluate proposals for new use(s) of the Hot Springs Campus (see Section 2.3.8). VA would continue to maintain the property until a re-use of the campus is identified and approved. If necessary, VA would secure and maintain the property following the National Park Service's guidance for mothballing historic buildings, which "involves controlling the long-term deterioration of the building while it is unoccupied as well as finding methods to protect it from sudden loss by fire or vandalism. This requires securing the building from unwanted entry, providing adequate ventilation to the interior, and shutting down or modifying existing utilities" (NPS 1993).

The existing Rapid City CBOC is a leased facility from which VA could re-locate with no future actions required of VA.

### 2.3.1.2 *Employment*

Under both Alternative A-1 and A-2, VA BHHCS would gradually reduce the number of employees in Hot Springs from the current level, which is 357 full-time equivalent employees (FTEEs), and increase the number of employees in Rapid City, which is currently 30 FTEEs:

One *full-time equivalent employee*, or *FTEE*, represents either one full-time employee working 40 hours per week, or two or more part-time employees whose combined working hours total to 40 hours per week.

- Approximately 67 FTEEs would staff the proposed Hot Springs CBOC under Alternative A-1, and maintain the vacated campus; this represents a decrease of 290 FTEEs in Hot Springs. The same number of employees would be expected to staff the updated Building 12 CBOC on the existing campus under Alternative A-2.
- Approximately 128 FTEEs would staff the proposed Rapid City area MSOC and RRTP, an increase of 98 FTEEs in Rapid City.
- The remaining Hot Springs FTEEs not transitioned to Rapid City would decrease through eligible retirements, early retirements, buy-outs, and voluntary separations. No VA employees would lose VA employment, although they may need to fill a different job, with retraining as needed.

### 2.3.1.3 *Estimated Cost*

The total estimated costs for Alternative A-1 range between **\$148,622,461** for the new construction option in Hot Springs and Rapid City, and **\$153,021,829** for the new lease option in Hot Springs and Rapid City. The total estimated costs for Alternative A-2 would be **\$217,103,464** for the renovate-new construction option and **\$220,766,343** for renovate-lease option. A cost breakout for Hot Springs and Rapid City facilities under Alternatives A-1 and A-2 is summarized in Table 2-2. These costs were estimated by Jones Lang LaSalle (2012a) and included real property and operational costs, using the methodology described as follows:

- a. Isolate the cost components for each alternative (based on facility needs and acquisition method).
- b. Estimate 30-year life cycle costs of non-recurring (that is, capital investment) and facility recurring costs (that is, lease payments and operating costs). The 30-year life cycle cost represents the present value of recurring and non-recurring cash flows between 2013 and 2043. Data sources included:
  - i. VA resources such as CFM's Facility Condition Assessment and Capital Resource Survey.
  - ii. Adjusted CFM renovation cost estimates based on recommendations from a historic architect (Treanor 2012).
  - iii. Private sector resources such as Building Owners and Managers Association, Co-Star Realty Information, Inc., and RSMeans (construction cost data supplier).
- c. Aggregate 30-year life cycle costs of the cost components within each alternative.
- d. VA to maintain a firehouse in each alternative that includes RRTP beds in Hot Springs.

- e. Mothballing of Facilities in Hot Springs:
  - i. In Alternative A-1 where CBOC and RRTP move off-site, entire campus would be mothballed.
  - ii. In Alternative A-2 where a portion of Building 12 is renovated, the other buildings on campus may be mothballed.
  - iii. Mothball costs included in Cost Effectiveness Analysis (CEA) for 30 years; fixed operating expenses reduced annually over a 10-year period through attrition (25% in year 1 and 10% of balance in each year thereafter).
  - iv. Mothballing costs do not include costs for non-recurring maintenance and repair of the buildings while in an unoccupied state.
- f. Renovation of Facilities in Hot Springs
  - i. Renovation methodology based on recommendations by an historic architect.
  - ii. Light, medium and total renovation costs calculated using Domiciliary or Outpatient Clinic factor found in the OCFM VISN 23 cost guide. Renovation cost estimates were found to duplicate with work items included in FCA correction costs.
  - iii. +25% adjustment factor to account for additional accessibility work anticipated.
  - iv. Contractors' fees (25%) and contingency allowance (10%).

Note while costing may be a reason to consider an action, and cost estimates are provided for each alternative and provide a basis for comparison across alternatives, cost will not be the basis for the final decision. The Secretary [VA decision maker] will consider many factors before making his decision. Also, in response to public comment to update the cost data, VA is unable to expend appropriated funds to update the data due to current appropriations law restrictions. While the cost estimates, which were developed in 2012, could not be updated, use of the original data set (used in the Draft EIS) to develop a new cost estimate for Alternative A-2 and revised costs for Alternative E, allows a fair and consistent comparison of costs across all the alternatives. Table 2-2. Estimated Cost Breakout for Alternatives A-1 and A-2.



**Table 2-2. Estimated Cost Breakout for Alternative A-1 and A-2**

Feature	Square footage (GSF)	Estimated 30-Year Life Cycle Cost	Notes
Build CBOC in Hot Springs (Alternative A-1)	16,711	\$62,868,156	<ul style="list-style-type: none"> <li>Recurring 30-year life cycle operating costs include mothball costs of \$22,392,147. Mothball costs are minimum costs associated with upkeep of buildings that are no longer being used.*</li> </ul>
Lease CBOC in Hot Springs (Alternative A-1)	16,711	\$63,605,645	
Renovate CBOC in Building 12 on Hot Springs Campus (Alternative A-2)	45,481	\$131,349,160	<ul style="list-style-type: none"> <li>Recurring 30-year life cycle operating costs include mothball costs of \$19,294,939; and non-recurring 30-year life cycle renovation costs of \$11,095,065 (\$242/GSF). [says 11,446,233 earlier in JLL report]</li> <li>Renovation includes full renovation of only one floor of Building 12. Renovation estimate for Building 12 uses the Outpatient Clinic Renovation Type factor and is assumed to correct mechanical, systems, accessibility, and electrical FCA deficiencies for only 29,896 GSF for use as a CBOC.</li> <li>Buildings 18, 64 and 65 would also be renovated under Alternative A-2 (FCA only).</li> </ul>
Build co-located MSOC/100-bed RRTP in Rapid City (Alternatives A-1 and A-2)	146,395	\$85,754,304	
Lease co-located MSOC/100-bed RRTP in Rapid City (Alternatives A-2 and A-3)	146,395	\$89,417,183	

Source: Jones Lang LaSalle 2012a.

\* Given use of existing Buildings 3 and 4 as the new National Call Center location, annual recurring mothballing costs would be slightly less than identified; however, since the cost reductions would be identical across all the alternatives, the current cost comparisons are still representative and appropriate; no change has been made.

### 2.3.1.4 Timeline

Alternatives A-1 and A-2 would be implemented over a five-year timeline from design to completion, beginning at some point after publishing the Record of Decision for this EIS and based on available funding.

It is important to note that although actual construction activities (site preparation, erection of structures, utilities installations, interior finishes, and landscaping) would probably take between two and three years, the time period used for analysis includes the ramp-up time to construction (site selection and acquisition, plans and designs) and transition time following construction to full

operational status of the reconfiguration of services. This general timeline is applicable to Alternatives A-1, A-2, B and D which include some elements potentially requiring new construction at a new site.

Under Alternative A-1 there would be no disruption to services while renovation is underway; outpatient health care services would continue at the existing facility until the new facilities in Hot Springs and Rapid City are constructed and fully operational. Under Alternative A-2, there would be no disruption in outpatient clinical services while renovation is underway. The clinic could be temporarily relocated or the clinic could be permanently moved to a different location within Building 12. It is anticipated that the new or updated facilities would become fully operational in Year 3. Table 2-1 provides a comparison between the health care services currently available at the Hot Springs Campus (under Alternative F) and those that would be available in the new facilities (CBOC and RRTP) under Alternatives A-1 and A-2. The hospital care services (e.g., inpatient, basic outpatient surgery, urgent care) would be transitioned during the first year of construction, with Veterans given additional choices of receiving purchased care for inpatient, laboratory, pharmacy, urgent care, surgery, additional specialty care and medical imaging, and nursing home services from community providers in Hot Springs and communities closer to Veterans' homes.

### **2.3.2 Alternative B – Hot Springs CBOC and RRTP, Rapid City MSOC**

Under Alternative B, VA BHHCS would build or lease a CBOC and 100-bed RRTP in the Hot Springs area, build or lease an MSOC in the Rapid City area, and cease providing services from the existing Hot Springs Campus and Rapid City CBOC. The subsections that follow address the physical facilities, employment, estimated cost, and timeline for Alternative B. The reader is referred back to Alternative A-1 for details of elements that are identical within the two alternatives.

Alternative B does not fully meet all elements of purpose and need. While it offers an updated and handicapped accessible CBOC in Hot Springs, a new MSOC in Rapid City, and expanded providers and services under the CITC, it does not provide the full quality of care VA seeks with respect to the RRTP treatment program. Specifically, an RRTP location in Hot Springs does not offer the full set of services available in a more urban like setting (e.g., Rapid City), which VA believes help provide greater opportunities for successful treatment and community reintegration (see related discussion in Section 1.2.2.3).

#### **2.3.2.1 Facilities**

##### **2.3.2.1.1 New Facilities**

##### ***Hot Springs CBOC and RRTP***

VA would construct or lease buildings in the Hot Springs area to serve as a new CBOC and 100-bed RRTP. The co-located CBOC and RRTP would require an estimated 102,571-square-foot facility with 300 parking spaces on approximately 15 acres.

All details for the CBOC are the same as those described in Section 2.3.1.1.1, in the subsection *Hot Springs CBOC – Alternative A-1 Option*.

The actual concept or design for a Hot Springs RRTP is unknown, but Figure 2-4 (in Section 2.3.1.1.1 for Alternative A) illustrates a modern RRTP based on VA's current design guidelines and approaches. It is likely to be a single- and multi-story apartment and townhouse setting, similar to the facility shown in Figure 2-4. The Veterans' residences would consist of patient care units, each with single and double rooms for up to four residents with shared living, kitchen, laundry, and bathroom space. The Hot Springs RRTP would have a sweat lodge in a secluded location; a central patient dining area; and a common area for therapy, education, training, recreation, conference, and administration. Constructing or leasing an RRTP in the Hot Springs area would require VA to also build or lease a firehouse to protect life and property.

VA has not identified a specific location for a Hot Springs CBOC and RRTP, although it would be expected to be within or near the city limits of Hot Springs. The facilities would either be constructed under contract to VA on land purchased by VA, or existing buildings modified or new buildings constructed ("build to suit" arrangement) according to VA specifications by a developer who would enter into a long-term lease with VA.

### **Rapid City MSOC**

VA would construct or lease a building in the Rapid City area to serve as an MSOC. The MSOC is estimated to require approximately 10 acres, with 66,281 square feet of building space and 400 parking spaces. The actual concept or design for the proposed Rapid City MSOC is unknown, but Figure 2-3 in Section 2.3.1.1.1 provides examples of modern VA outpatient clinics of similar size based on VA's current design guidelines and approaches.

The MSOC would either be constructed under contract to VA on land purchased by VA, or an existing building modified or new building constructed ("build to suit" arrangement) according to VA specifications by a developer who would enter into a long-term lease with VA.

VA has not identified a specific location for a Rapid City MSOC, although it would be expected to be within or near the city limits of Rapid City. General site selection criteria would be the same as those described in Section 2.3.1.1.1, in the subsection *Hot Springs CBOC – Alternative A-1 Option*.

### **2.3.2.1.2 Vacated Facilities**

Under Alternative B, VA BHHCS would no longer offer health care services from the existing Hot Springs Campus or Rapid City CBOC. Vacated facilities would be handled the same way as discussed for vacated facilities under Alternative A.

### **2.3.2.2 Employment**

Under Alternative B, VA BHHCS would gradually reduce the number of employees in Hot Springs from the current level, which is 357 FTEs, and increase the number of employees in Rapid City, which is currently 30 FTEs:

- Approximately 139 FTEs would staff the proposed Hot Springs CBOC and RRTP and maintain the vacated campus, a decrease of 218 FTEs in Hot Springs.
- Approximately 56 FTEs would staff the proposed MSOC in Rapid City, an increase of 26 FTEs in Rapid City.

- The remaining Hot Springs FTEEs would decrease gradually through early retirements, buy-outs, and voluntary separations. No VA employees would lose VA employment, although they may need to fill a different job, with retraining as needed.

### 2.3.2.3 Estimated Cost

The estimated costs for Alternative B use the same methodology and data sources described in Section 2.3.1.3. The entire campus under Alternative B would be mothballed, similar to that described in Alternative A-1, where both the CBOC and RRTP would move off-site. The total estimated costs for Alternative B are \$168,234,767 for the new construction option, and \$170,713,726 for the new lease option. A cost breakout for Hot Springs and Rapid City facilities is summarized in Table 2-3.

**Table 2-3. Estimated Cost Breakout for Alternative B**

Feature	Square footage (GSF)	Estimated 30-Year Life Cycle Cost	Notes
Build CBOC in Hot Springs (Alternative A-1)	16,711	\$62,868,156	Recurring 30-year life cycle operating costs include mothball costs of \$22,392,147. Mothball costs are minimum costs associated with upkeep of buildings that are no longer being used.*
Lease CBOC in Hot Springs (Alternative A-1)	16,711	\$63,605,645	
Build 100-bed RRTP and firehouse in Hot Springs	78,761 7,009	\$56,957,201	Includes \$38,271,859 for RRTP and \$18,685,342 for firehouse
Lease 100-bed RRTP and firehouse in Hot Springs	78,761 7,099	\$58,146,688	Includes \$39,572,498 for RRTP and \$18,574,190 for firehouse
Build MSOC in Rapid City	66,278	\$48,409,410	
Lease MSOC in Rapid City	66,278	\$48,962,393	

Source: Jones Lang LaSalle 2012a.

\* Given use of existing Buildings 3 and 4 as the new National Call Center location, annual recurring mothballing costs would be slightly less than identified; however, since the cost reductions would be identical across all the alternatives, the current cost comparisons are still representative and appropriate; no change has been made.

### 2.3.2.4 Timeline

Alternative B would be implemented over a five-year timeline from design to completion, beginning at some point after publishing the Record of Decision for this EIS and based on available funding.

Similar to the timeline described for Alternatives A-1 and A-2, the time period used for analysis includes the ramp-up time to construction (site selection and acquisition, plans and designs) and transition time following construction to full operational status of the reconfiguration of services.

There would be no disruption to services under Alternative B; healthcare services would continue at the existing facilities until the new facilities are constructed and fully operational. It is anticipated that the new facilities in both Hot Springs and Rapid City would become fully operational in Year 3. Table 2-1 provides a comparison between the health care services currently available at the Hot

Springs Campus (under Alternative F) and those that would be available in the new facilities (CBOC and RRTP) under Alternative B. The hospital care services (e.g., inpatient, surgery, urgent care) would be transitioned during the first year of construction, with Veterans given additional choices of receiving purchased care for inpatient, laboratory, pharmacy, urgent care, surgery, additional specialty care and medical imaging, and nursing home services from community providers in Hot Springs and communities closer to Veterans' homes.

### **2.3.3 Alternative C – Hot Springs Renovation, Rapid City MSOC**

Under Alternative C, VA BHHCS would renovate Building 12 at the existing Hot Springs Campus as the location for a CBOC, renovate the Hot Springs domiciliary to be a 100-bed RRTP, and build or lease an MSOC in the Rapid City area. The subsections that follow address the physical facilities, employment, estimated cost, and timeline for Alternative C. The reader is referred back to Alternative A for details of elements that are identical within the two alternatives.

Alternative C does not fully meet all elements of purpose and need. While it does offer an updated CBOC in Hot Springs, a new MSOC in Rapid City, expanded providers and services under the CITC, and improvements to the RRTP (e.g., handicapped accessible and more residential like setting), it does not provide the quality of care VA seeks with respect to the RRTP treatment program. Specifically, an RRTP location in Hot Springs does not offer the full set of services available in a more urban like setting (e.g., Rapid City), which VA believes help provide greater opportunities for successful treatment and community reintegration (see related discussion in Section 1.2.2.3).

#### **2.3.2.1 Facilities**

##### **2.3.3.1.1 Renovated and New Facilities**

###### ***Hot Springs CBOC***

VA would renovate the existing hospital building (Building 12) for use as a CBOC on the Hot Springs Campus. The boiler plant (Building 18), high voltage switchgear building (Building 64), and information resources management building (Building 65) would also be renovated and remain in use. The CBOC is estimated to require 45,841 square feet within the 134,918-square-foot building.

###### ***Hot Springs RRTP***

VA would renovate the administration building (Building 1), dining services (Building 2), patient wards (Buildings 3 through 8), the auditorium/local call center (Building 11), one duplex quarters (Building 29), and the fire/security facility (Building 66) to serve as and support a 100-bed RRTP on the Hot Springs Campus. As described above for a CBOC located on the campus, the boiler plant (Building 18), high voltage switchgear building (Building 64), and information resources management building (Building 65) would also be renovated and remain in use, supporting the CBOC and the RRTP.

The existing space in the patient wards can accommodate 110 beds while adhering closely to the desired recovery model of care. The patient care unit would be single and double rooms of 8 to 16 beds with shared bathroom space. Accessibility standards could be met by modifications, which

would require a significant amount of evaluation and study to ensure major character-defining features of the historical property are not destroyed in the process.

### ***Rapid City MSOC***

VA would construct or lease a building in the Rapid City area to serve as an MSOC; all details are the same as those described for Alternative B in Section 2.3.2.1.1, in the subsection *Rapid City MSOC*. VA has not identified a specific location for the MSOC, although it would be expected to be within or near the city limits of Rapid City.

#### **2.3.3.1.2 Vacated Facilities**

Under Alternative C, VA BHHCS would not have use for some portions of the hospital building (Building 12) and would therefore close areas of the building. This alternative would close the two existing chapels (Buildings 9 and 10), which are attached to Building 2, and all other buildings not listed above as being used for the CBOC, RRTP, or their supporting functions. VA BHHCS would no longer offer health care services from the existing Rapid City CBOC. Vacated facilities would be handled the same way as discussed for vacated facilities under Alternative A.

#### **2.3.3.2 Employment**

Under Alternative C, VA BHHCS would gradually reduce the number of employees in Hot Springs from the current level, which is 357 FTEEs, and increase the number of employees in the Rapid City area, which is currently 30 FTEEs:

- Approximately 139 FTEEs would staff the proposed Hot Springs CBOC and RRTP and maintain the vacated campus, a decrease of 218 FTEEs in Hot Springs.
- Approximately 56 FTEEs would staff the proposed MSOC in Rapid City, an increase of 26 FTEEs in Rapid City.
- The remaining Hot Springs FTEEs would decrease gradually through early retirements, buy-outs, and voluntary separations. No VA employees would lose VA employment, although they may need to fill a different job, with retraining as needed.

#### **2.3.3.3 Estimated Cost**

The estimated costs for Alternative C use the same methodology and data sources described in Section 2.3.1.3. With respect to mothballing where the existing CBOC is renovated, mothball costs/inventory are determined by the number of RRTP beds (i.e., 100) that remain on campus throughout the 30-year time horizon.

The total estimated costs for Alternative C are \$229,838,861 for the CBOC-RRTP Hot Springs renovation and MSOC new construction in Rapid City, and \$230,391,843 for the CBOC-RRTP Hot Springs renovation and MSOC lease in Rapid City. A cost breakout for Hot Springs and Rapid City facilities is provided in Table 2-4.



**Table 2-4. Estimated Cost Breakout for Alternative C**

Feature	Square footage (GSF)	Estimated 30-Year Life Cycle Cost	Notes
Renovate CBOC and 100-bed RRTP on existing Hot Springs Campus	239,845	\$181,429,450	<ul style="list-style-type: none"> <li>• Recurring 30-year life cycle operating costs include mothball costs of \$10,298,996</li> <li>• Renovation costs of \$44,079,674 (\$184/GSF). The medium renovation estimate for Building 12 uses the Outpatient Clinic Renovation Type factor and is assumed to correct mechanical, systems, accessibility, and electrical FCA deficiencies for only 29,896 GSF for use as a CBOC (one floor of Building 12).</li> <li>• The following additional buildings also would be renovated under Alternative C: Buildings 1-3 and 5-8 (light renovations); Building 4 (medium renovation); and Buildings 11, 18, 29, 64, 65 and 66 (FCA only).</li> </ul>
New MSOC in Rapid City	66,278	\$48,409,410	
Lease MSOC in Rapid City	66,278	\$48,962,393	

Source: Jones Lang LaSalle 2012a.

Source: Jones Lang LaSalle 2012a.

\* Given use of existing Buildings 3 and 4 as the new National Call Center location, annual recurring mothballing costs would be slightly less than identified; however, since the cost reductions would be identical across all the alternatives, the current cost comparisons are still representative and appropriate; no change has been made.

### **2.3.3.4 Timeline**

Alternative C would be implemented over a five-year timeline beginning at some point after publishing the Record of Decision for this EIS and based on available funding. Because existing facilities would be renovated to accommodate an updated CBOC and RRTP on the Hot Springs Campus, there would be some disruption to services under Alternative C, however, VA would make every effort to minimize these disruptions / interruptions in service. The availability of sufficient workaround space within the existing buildings would allow certain portions of the hospital and Dom to be utilized while others portions are being renovated. No disruption in services would occur in Rapid City. It is anticipated that the updated facilities would become fully operational sometime in Year 3. Table 2-1 provides a comparison between the health care services currently available at the Hot Springs Campus (under Alternative F) and those that would be available in the new facilities (CBOC and RRTP) under Alternative C. The hospital care services (e.g., inpatient, surgery, urgent care) would be discontinued during the first year of construction, with Veterans given additional choices of receiving purchased care for inpatient, laboratory, pharmacy, urgent care, surgery, additional specialty care and medical imaging, and nursing home services from community providers in Hot Springs and communities closer to Veterans' homes.

## **2.3.4 Alternative D – Hot Springs CBOC and RRTP, Rapid City MSOC and RRTP**

Under Alternative D, VA BHHCS would build or lease a CBOC and 24-bed RRTP in the Hot Springs area, build or lease an MSOC and 76-bed RRTP in the Rapid City area, and cease providing services from the existing Hot Springs Campus and Rapid City CBOC. The subsections that follow address the physical facilities, employment, estimated cost, and timeline for Alternative D. The reader is referred back to Alternative A for details of elements that are identical within the two alternatives.

Alternative D fully meets all the elements of purpose and need. In addition to offering a new and updated CBOC in Hot Springs and new MSOC in Rapid City, it offers expanded providers and services under the CITC program, and fully meets the current VA mental health standards for residential treatment. Locating a 76-bed RRTP in Rapid City is consistent with VA mental health design guidelines and offers the advantages of a more urban like setting to help improve life skills and achieve successful community reintegration (see discussion in Section 1.2.2.3). The 24-bed facility in Hot Springs would be used primarily for Post-Traumatic Stress Disorder (PTSD) treatment which is not as heavily influenced by location setting (urban versus rural).

### **2.3.4.1 Facilities**

#### **2.3.4.1.1 New Facilities**

##### ***Hot Springs CBOC and RRTP***

VA would construct or lease buildings in the Hot Springs area to serve as a CBOC and 24-bed RRTP. For the CBOC, details are expected to be similar to those described for Alternative A in Section 2.3.1.1.1, in the subsection *Hot Springs CBOC – Alternative A-1 Option*. With the exception of a smaller size, the RRTP design details and patient care units are the same as those described for Alternative B in Section 2.3.2.1.1, in the subsection *Hot Springs RRTP*, including the requirement that VA would also build or lease a firehouse to protect life and property. If the CBOC and RRTP are co-located, the total space requirements would range from 44,830 to 95,386 square feet, including the fire station, on approximately 11 to 13 acres.

##### ***Rapid City MSOC and RRTP***

VA would construct or lease buildings in the Rapid City area, at a single location, to serve as an MSOC and 76-bed RRTP; construction details and overall space and land requirements would be generally similar to those described for Alternative A in Section 2.3.1.1.1, in the subsection *Rapid City MSOC and RRTP*.

#### **2.3.4.1.2 Vacated Facilities**

Under Alternative D, VA BHHCS would no longer offer health care services from the existing Hot Springs Campus or Rapid City CBOC. Vacated facilities would be handled the same way as discussed for vacated facilities under Alternative A.



### **2.3.4.2      *Employment***

Under Alternative D, VA BHHCS would gradually reduce the number of employees in Hot Springs from the current level, which is 357 FTEEs, and increase the number of employees in Rapid City, which is currently 30 FTEEs:

- Approximately 87 FTEEs would staff the proposed Hot Springs CBOC and RRTP and maintain the vacated campus, a decrease of 270 FTEEs in Hot Springs.
- Approximately 118 FTEEs would staff the proposed MSOC and RRTP in Rapid City, an increase of 88 FTEEs in Rapid City.
- The remaining Hot Springs FTEEs would decrease gradually through early retirements, buy-outs, and voluntary separations. No VA employees would lose VA employment, although they may need to fill a different job, with retraining as needed.

### **2.3.4.3      *Estimated Cost***

The estimated costs for Alternative D use the same methodology and data sources described in Section 2.3.1.3. With respect to mothballing, the entire campus under Alternative D would be mothballed, similar to that described for Alternatives A-1 and B, since the CBOC and RRTP (76- and 24-bed facilities) would move off-site. The total estimated costs for Alternative D are \$176,040,980 for the new construction CBOC-RRTP (24-bed) in Hot Springs and MSOC RRTP (76-bed) in Rapid City, and \$182,387,084 for the lease option for CBOC-RRTP combination in Hot Springs and the MSOC-RRTP combination in Rapid City. A cost breakout for Hot Springs and Rapid City facilities is provided in Table 2-5.

**Table 2-5. Estimated Cost Breakout for Alternative D**

Feature	Square footage (GSF)	Estimated 30-Year Life Cycle Cost	Notes
Build Hot Springs CBOC	16,711 (CBOC)  28,117 (24-bed RRTP)	\$62,868,156	Recurring 30-year life cycle operating costs include mothball costs of \$22,392,147. Mothball costs are minimum costs associated with upkeep of buildings that are no longer being used.*
Lease Hot Springs CBOC	7,099 (Firehouse)	\$63,604,645	
Build Hot Springs 24-bed RRTP and firehouse		\$14,753,445 (24-bed) \$18,685,342 (firehouse)	
Lease Hot Springs 24-bed RRTP and firehouse		\$17,713,401 (24-bed) \$18,574,190 (firehouse)	
New construction of MSOC and 76-bed RRTP in Rapid City	132,942	\$79,734,037	
Lease MSOC and 76-bed RRTP in Rapid City	132,942	\$82,494,849	

Source: Jones Lang LaSalle 2012a.

\* Given use of existing Buildings 3 and 4 as the new National Call Center location, annual recurring mothballing costs would be slightly less than identified; however, since the cost reductions would be identical across all the alternatives, the current cost comparisons are still representative and appropriate; no change has been made.

#### **2.3.4.4 Timeline**

Alternative D would be implemented over a five-year timeline from design to completion, beginning at some point after publishing the Record of Decision for this EIS and based on available funding.

Similar to the timeline described for Alternatives A-1 and A-2, the time period used for analysis includes the ramp-up time to construction (site selection and acquisition, plans and designs) and transition time following construction to full operational status of the reconfiguration of services.

There would be no disruption in services in Hot Springs or Rapid City. Health care services would continue at the existing facilities until the new facilities are constructed and fully operational. It is anticipated that the new facilities would become fully operational in Year 3. Table 2-1 provides a comparison between the health care services currently available at the Hot Springs Campus (under Alternative F) and those that would be available in the new facilities (CBOC and RRTP) under Alternative D. The hospital care services (e.g., inpatient, surgery, urgent care) would be

discontinued during the first year of construction, with Veterans given additional choices of receiving purchased care for inpatient, laboratory, pharmacy, urgent care, surgery, additional specialty care and medical imaging, and nursing home services from community providers in Hot Springs and communities closer to Veterans' homes.

### 2.3.5 Alternative E – Save the VA Proposal

The Save the VA (STVA) proposal was prepared by a coalition from the Hot Springs community and is provided in its entirety in Appendix B to this EIS. The proposal includes elements that would be implemented by VA BHHCS, a nonprofit organization (Hot Springs Community Partnership Corporation), a for-profit company (Veterans Industries), regional higher education providers, major medical research facilities, the City of Hot Springs, and Fall River County. Its key features are continuing and expanded health care services at the Hot Springs Campus, implementing a national demonstration project focusing on treatment and clinical research for PTSD in an expanded Hot Springs domiciliary, and VA partnership with the local community in a CWT program in Hot Springs. The following sections summarize the features of this proposal that would occur at VA facilities or be implemented by VA BHHCS. The full proposal (Appendix B) describes all features of the project.

Note that some elements identified and evaluated for Alternative E in the Draft EIS have changed in the Final EIS in response to STVA comments that further clarified the scope of their original proposal. In particular, STVA fully supports the expansion of a CBOC to an MSOC in Rapid City, and this has been clarified in the Final EIS. VA also agrees that the existing facilities can be renovated for suitable use and that the existing Dom can accommodate up to 160 beds, as originally proposed, configured in private and semi-private patient rooms in buildings 4 through 8. An additional 40 beds could also potentially be configured in other buildings on campus such as the quarters buildings. As a result, the proposed construction of an additional 84,110 square feet of building to house 82 patients - in order to reach the required 200 beds originally assumed under Alternative E - has been eliminated.

In addition to the changes to facilities as described below, the STVA proposal includes other VA actions and participation. The nonprofit Hot Springs Community Partnership Corporation would establish a joint services agreement with VA for CWT services, managing revenue returns to VA, and other purposes, as necessary:

- **Compensated Work Therapy:** The Corporation's for-profit subsidiary, Veterans Industries, would function as the CWT location for Hot Springs RRTP residents. A related incentive work therapy program, also through Veterans Industries, would provide part-time work for Veterans in after care treatment in the RRTP to slowly adjust to the demands of a work schedule.
- **Revenue returns:** Seventy-five percent of the profits from the Corporation's for-profit subsidiary, Veterans Industries, would go to VA for patient and treatment costs of Veterans at the Hot Springs RRTP.

VA would participate in a joint evaluation team to biennially assess the progress of the Corporation and its for-profit subsidiary against performance benchmarks to be established by the Corporation's Board of Directors. VA would also cooperate with the Corporation and other appropriate

stakeholders in activities such as white papers, materials, seminars, and other appropriate support for an interested national audience.

The Hot Springs medical center would work with VA medical researchers and those from major medical research facilities to provide and conduct (with informed consent) research into treatment effectiveness and into regional and local issues that may not affect Veterans in urban settings. Should the project be a success, VA could determine after 10 years if the Hot Springs facility is adequate for a Center of Excellence designation. Research could also be conducted on traditional Native American healing activities, including sweat lodges and mineral water therapy; this could also encourage currently untreated Native American Veterans in the catchment area to enroll in the Hot Springs treatment programs. Special research attention would be given to the integration of Veterans Industries into treatment components.

Although the Save the VA proposal did not include specific provisions for purchased care, certain services from community providers would remain available under this alternative (e.g., Veterans Choice Program at [www.va.gov/opa/choiceact/](http://www.va.gov/opa/choiceact/)), as described in Section 2.2.

Alternative E does not fully meet purpose and need. While it offers updated and expanded health care services in Hot Springs, a new MSOC in Rapid City, and access to community providers, the continued operation of the Campus in Hot Springs could serve to limit the choices available to Veterans from non-VA care providers, thereby requiring more driving for Veterans in some instances such that geographic access remains a potential concern. The proposed renovations and rehabilitation to the existing Hot Springs Campus would address the accessibility concerns and help meet many of the VA standards for residential treatment (i.e., more emphasis on residential-like setting). However, it does not provide the higher quality of care VA seeks with respect to the RRTP treatment program. Specifically, an RRTP location in Hot Springs does not offer the full set of services available in a more urban like setting (e.g., Rapid City), which VA believes are important to successful treatment and reintegration into the community (see related discussion in Section 1.2.2.3).

### **2.3.5.1 Renovated and New Facilities**

#### **Hot Springs Campus**

Internal and external renovations would be made to buildings on campus to meet VA inpatient and accessibility standards. Renovations to the hospital (Building 12) would accommodate an increase in inpatient (acute care) beds from 10 to 15, add 3 intensive care unit beds, and increase the community living center (nursing home) beds from 7 to 15. Other building spaces would be identified and renovated as necessary for medical research activities.

The standard operating and maintenance plan for the Hot Springs Campus would continue to be determined and directed by VA staff. The Save the VA proposal states that the private company Veterans Industries would facilitate certification of CWT patients in historic preservation practices, following which Veterans Industries employees would conduct renovations and upgrades. Because the training required for complex renovations could be lengthy, VA's financial analysis of the Save the VA proposal accounted for the timing of VA's investment (i.e., for required initial facility renovations) to occur before CWT patients are trained for complex renovations.

Table 2-6 summarizes the Alternative E renovations to the VA Hot Springs hospital (Building 12) and other campus buildings included in Alternative E; renovations to the domiciliary are addressed in the next section.

**Table 2-6. Hot Springs Hospital and Campus Construction/Renovations, Alternative E**

Building/Location	Construction / Renovation
Boiler plant	Green standard upgrades to update four boilers for dual source fuel to add liquid natural gas.
Near boiler plant	Build new storage facility by the boiler plant.
Buildings 11 (local call center) or 43 (laundry)	Save the VA proposed renovating existing buildings (i.e., Buildings 11 or 43) to create four 600-square-foot classrooms. (see Table 2-12).
Hospital (Building 12)	Add second floor to east wing addition for surgery suites and updated air handling and storage areas.
Hospital (Building 12)	Renovate the old surgery area for recovery rooms and the west end for specialty clinics.
Hospital (Building 12)	Convert south wings to 15-bed inpatient ward.
Hospital (Building 12)	Convert north wing to allow for more specialty clinic space.
Hospital (Building 12)	Renovate ward 1-East for continued inpatient care.
Director's quarters (Building 23)	Renovate to become the headquarters for the National Archives. The lower level could be turned into the museum and visitor center. The upper levels could be turned into offices.
Near Building 23	Add a building that has museum-quality heat and light controlled areas for preservation of special documents and historical items if needed.

### **Hot Springs RRTP**

Renovations would be made to accommodate 200 residents, create additional RRTP living spaces, and meet existing code, *Architectural Barriers Act* requirements, and VA residential standards. Some facilities would require adjustments to existing ramps to achieve 100 percent accessibility. Updates such as tunnels, bridges, or elevators would also contribute to meeting accessibility standards. The RRTP would be renovated to provide private or semi-private rooms with closer bathrooms for residents. Historic preservation standards would be followed during renovations.

The Save the VA proposal originally specified that the existing domiciliary would be renovated to accommodate 200 residents. VA's original analysis (Jones Lang LaSalle 2012b) had concluded that an additional RRTP facility would also need to be constructed onsite to accommodate the additional beds and services included in the proposal. However, VA now agrees that the existing domiciliary could potentially be renovated to accommodate up to 160 beds configured in private and semi-private patient rooms in buildings 4 through 8; and an additional 40 beds could potentially be configured in other buildings on campus such as the quarters. In light of this new information, VA has amended its original scope to include 200 beds without the need to construct a new facility.

Save the VA proposed that an educational facility would be created with sufficient classroom space to accommodate at least four simultaneous classes for patient treatment and orientation, as well as education and college-level classes. These classrooms would each be about 600 square feet and

outfitted with tables, chairs, Smart Board, projection system, computer, screen, and a high definition monitor. The educational facility would also incorporate video conferencing, audio conferencing, and online capabilities. The nonprofit Hot Springs Community Partnership Corporation would enter into agreements with educational providers to establish outreach programs at the Hot Springs Campus. These programs and classrooms would be available for RRTP residents, VA staff, Veterans in the catchment area, Veterans Industries employees, and community members. Save the VA proposal stated that existing buildings or rooms would be modified to accommodate these educational opportunities, and their comments on the Draft EIS clarified which existing buildings could be modified to create these classrooms (Buildings 11 or 43). The original STVA cost estimate has been revised to eliminate construction costs for an 82-bed RRTP, however, it no longer captures the potential cost to renovate additional buildings to accommodate more beds, or turn Buildings 11 or 43 into classrooms, or construct or lease new storage or office space that might be needed if building 11 or 43 were converted to classrooms. VA is unable to update the cost information provided in the EIS due to current appropriation restrictions.

Table 2-7 summarizes the VA Hot Springs domiciliary complex (Buildings 1 through 11) renovations included in Alternative E.

**Table 2-7. Hot Springs Domiciliary and Related Renovations under Alternative E**

<b>Building/Location</b>	<b>Renovation</b>
New construction, possibly west of Building 11, beyond parking lot, at horseshoe pits; or on the far side of the main parking lot by the Police and Fire Station and at the north end of 6th Street. Or use existing Buildings 21 or 28.	Separate family, singles with children, and female housing, all with handicap access, for a total of 40 beds capacity. The VA cost estimate (Jones Lang LaSalle 2012b) included this housing in the renovation estimate for the line item below, which would convert four current residences into multifamily housing.
Buildings 20, 21, 23, 24, 25, 26, 27, 28, 29 (four only)	Renovation of four current medical residences into apartments to house families of RRTP residents participating in integrated family counseling. Renovation of four current medical residences to serve as additional transitional residences for CWT patients. The VA cost estimate (Jones Lang LaSalle 2012b) assumed total renovation of Buildings 23, 24, 26, and 27 to convert quarters into multi-family transitional housing.
Buildings 3, 5, 6, 7, 8 (Building 4 has already been completed)	Complete remodel of B-level ramps from lower arcade to B wards.
Buildings 5, 7, 8	Install two, three, or four-stop elevators. The cost estimate assumed elevators would be added to all RRTP buildings instead of tunnels and bridges, since tunnels and bridges would further reduce available space, require rerouting water and sewer lines, require re-planning the building structural and physical system, and increase operating costs.
Buildings 3, 4, 6, 7	Two tunnels, between Buildings 3 and 4 and Buildings 6 and 7. VA did not include this in the cost estimate for the reasons listed above. Elevator costs were included instead.



Building/Location	Renovation
Not specified	Two bridges to allow access to upper arcade. The cost estimate assumed the bridges would be between Buildings 3 and 4 and Buildings 6 and 7. VA did not include this in the cost estimate for the reasons listed above. Elevator costs were included instead.
11 wards (Wards 3B and 5B are already remodeled)	Save the VA originally proposed to remodel wards for single and double occupancy rooms for a total of 200 patients. However: <ul style="list-style-type: none"> <li>The Save the VA proposal states this renovation would create a 200-bed RRTP, but the proposal's enumeration of the various types of beds sums to 192.</li> <li>VA has determined that Buildings 4 through 8 can be renovated to accommodate a total of 160 patients and still maintain the recovery model of care; therefore, this is the total used in the renovation cost estimate in Section 2.3.5.3.</li> </ul>
Near Buildings 3, 4, and near new housing (see Table 2-11)	Handicap parking between Buildings 3 and 4 and where new housing is added, for a total of 40 spaces.
Building 7	Two handicap ramps for west end of street-level entrance.
Buildings 1-11	Green standard upgrades to provide better insulation and thermal windows (inside envelope).
Buildings 11 or 43, and associated lease for local call center or new construction of storage building [these costs not included in estimate provided in Table 2-9.	STVA anticipated using Building 11, the area currently being used by the local call center, and/or Building 43 to accommodate classrooms for additional educational opportunities. If building 43 is used for educational opportunities, a new storage building would need to be built in the area of the boiler plant. If the local call center is used for educational opportunities, additional space would need to be leased. Possible locations include property in the Hot Springs Historic District; this is consistent with E.O. 13514 for implementing sustainable locations for federal facilities.

### **Rapid City MSOC**

VA would construct or lease a building in the Rapid City area to serve as an MSOC. The MSOC is estimated to require approximately 10 acres, with 66,281 square feet of building space and 400 parking spaces. The actual concept or design for the proposed Rapid City MSOC is unknown, but Figure 2-3 in Section 2.3.1.1.1 provides examples of modern VA outpatient clinics of similar size based on VA's current design guidelines and approaches.

The MSOC would either be constructed under contract to VA on land purchased by VA, or an existing building modified or new building constructed ("build to suit" arrangement) according to VA specifications by a developer who would enter into a long-term lease with VA.

VA has not identified a specific location for a Rapid City MSOC, although it would be expected to be within or near the city limits of Rapid City. General site selection criteria would be the same as those described in Section 2.3.1.1.1, in the subsection *Hot Springs CBOC – Alternative A-1 Option*.

### **2.3.5.1.2 Vacated Facilities**

Under Alternative E, VA BHHCS would no longer offer health care services from the existing Rapid City CBOC. This is a leased facility from which VA could re-locate with no future actions required of VA.

### **2.3.5.2 Employment**

VA would employ an adequate number of qualified professional, specialty, and support staff to provide the medical and treatment services in the Save the VA proposal, as well as serve as liaison to the Veterans Industries project. Positions would be established as full-time permanent staff. Save the VA stated that VA would activate policies to encourage and enhance staff retention. Appendix D to the Save the VA proposal identified the following approaches, all of which are currently utilized by VA BHHCS: nationwide advertisement, offers of permanent employment, and enhancing attraction of positions by providing information about education debt-reduction programs and benefits. Competencies could be developed and maintained through rotation to another facility for updates/training, virtual training, and simulation training.

After further consideration (i.e., taking into account the reduced number of beds in the RRTP), and in response to STVA comments, VA has reduced the number of FTEEs to staff the Hot Springs Campus, RRTP, and other services from 633 to 490 FTEE employees; this would be an increase of 133 FTEEs. Approximately 118 FTEEs would staff the proposed MSOC and RRTP in Rapid City, an increase of 88 FTEEs in Rapid City.

### **2.3.5.3 Estimated Cost**

The estimated costs for Alternative E are \$259,444,480 for the Hot Springs Campus renovations and new construction MSOC in Rapid City and \$259,997,463 for the Hot Springs Campus renovations and lease MSOC in Rapid City. While the original STVA proposal did not address the proposed action in Rapid City, they indicated their support for the expansion of the CBOC in Rapid City and VA has included this cost in to allow consistent comparison across alternatives A through E, and to further bound the impact analysis in the event the two actions were implemented together. These costs were estimated using the same methodology and data sources described in Section 2.3.1.3, although no buildings would be mothballed under Alternative E. Tables 2-6 and 2-7 include notes on assumptions VA made regarding the details of construction, renovation, and space planning in order to estimate the cost of each item included in the proposal. A cost breakout of Hot Springs and Rapid City facilities is provided in Table 2-8. Costs have been broken out for both locations to allow a clear comparison of costs at Hot Springs only, consistent with the scope of the STVA Alternative E.



**Table 2-8. Estimated Cost Breakout for Alternative E**

Feature	Square footage (GSF)	Estimated 30-Year Life Cycle Cost	Notes
Renovate existing facilities	458,947 (Hot Springs Campus)	\$217,036,697 [247,036,697 less \$30 Million cost of new construction for 82-bed facility; STVA indicated cost was \$36 M]	Includes total renovation costs of \$67,052,703, based on updated methodology that included corrections of FCA deficiencies on entire campus of \$35.3 million; original STVA proposal, which did not include the FCA corrections, assumed renovation costs of \$26.2 million. [renovation costs included for Buildings 11 and 43 only address FCA and not potential reuse for classrooms or potential need to construct or lease additional space for storage and office/local call center use.]
Build MSOC in Rapid City	66,278	\$48,409,410	Not that this cost was not in original STVA proposal but STVA supports an enlarged CBOC, as indicated in comments on DEIS. Therefore, to provide a consistent comparison across alternatives, VA has added this facility and associated cost to Alternative E. It provides a bounding analysis for impacts in the event that both projects in Hot Springs and Rapid City were implemented at the same time. Rapid City costs are broken out separately, however, so readers can distinguish them from those associated with the original STVA proposal which only affected the Hot Springs campus.
Lease MSOC in Rapid City	66,278	\$48,962,393	

Source: Jones Lang LaSalle 2012a.

#### **2.3.5.4 Timeline**

Medical facilities would be updated as necessary and all treatments and medical services would be maintained for a minimum five-year demonstration period in which to establish a new baseline of patient data. These data would be evaluated to determine recommendations related to levels of health care services. The Veterans Industries project would run for a minimum of 10 years. The Save the VA proposal states that the nonprofit Hot Springs Community Partnership Corporation would establish a joint services agreement with VA within six months. The CWT location would be operational within 18 to 24 months, and VA would begin receiving revenue returns from the Veterans Industries subsidiary in 36 to 48 months.

Alternative E would be implemented for at least a 10-year timeline beginning at some point after publishing the Record of Decision for this EIS and based on available funding. Other than indicating the need for a 10-year period to fully implement the proposal, STVA did not provide a specific timeline for when the construction/renovations would be completed and the expanded health care services would become operational. Because the entire campus would require extensive renovation and rehabilitation, there would likely be more disruption in services under Alternative E than under the other alternatives. However, it is assumed that renovations to the hospital (to provide primary and specialty outpatient services as well as inpatient services) and the Dom would be given priority and that the availability of workaround space within the existing hospital and Dom buildings would help to minimize disruptions by allowing certain portions of the hospital and Dom spaces to be utilized while others portions are being renovated. There would be no disruption of services provided in Rapid City. The renovated facilities would be expected to be fully operational sometime during Years 3 to 5. Table 2-1 provides a comparison between the health care services currently available at the Hot Springs Campus (under Alternative F) and those the expanded services that would be available on the Hot Springs Campus under Alternative E.

## **2.3.6 Alternative F – No Action**

### **2.3.6.1 Facilities**

#### ***Hot Springs Campus***

VA BHHCS would continue to provide primary care, nursing home, and other health services that are currently provided at the existing Hot Springs Campus. Scheduled and non-scheduled maintenance of buildings would continue, and upgrades and renovations to maintain clinical standards would be initiated as funding was available through the routine budgeting process. This definition of the no-action alternative is consistent with CEQ guidance relating to actions where ongoing programs will continue even as new plans are developed. In this situation “No action” means “no change” from current management direction or level of management intensity (CEQ Forty Questions, No. 3, 1981).

#### ***Hot Springs RRTP***

VA BHHCS would continue to provide RRTP services from the domiciliary on the existing Hot Springs Campus. Scheduled and non-scheduled maintenance of buildings would continue, and upgrades and renovations to maintain clinical standards would be initiated as funding was available through the routine budgeting process.

#### ***Rapid City CBOC***

VA BHHCS would continue to provide primary care and other health services from leased space in Rapid City. The current lease extends through January 2016, and may be renewed at that time or other space in Rapid City could be secured.

The mechanisms by which VA would cover the costs of community providers’ care for Veterans may change over time, but include the nationwide Veterans Choice Program ([www.va.gov/opa/choiceact/](http://www.va.gov/opa/choiceact/)) and the VA BHHCS’s current purchased care program for providing

referrals or authorizations for purchased care (billed to VA). There would be no immediate reconfiguration providing for additional purchased care for Veterans from regional tertiary or secondary care facilities within the region.

In addition to obtaining services from the existing Hot Springs and Rapid City VA facilities and through current provisions for community providers, Veterans may seek care from other VA locations (such as Fort Meade), receive prescriptions from a VA pharmacy by mail, and, for some health conditions, take advantage of “telehealth”.

Alternative F does not meet the purpose and need as described in detail in Section 1.2. The proposed renovations would occur over a longer period of time, as annual allocations allow, and accessibility and VA’s ability to deliver quality care would remain a concern. Also, the RRTP location in Hot Springs does not offer the higher quality of care and opportunities for successful community reintegration that VA believes is available in Rapid City (see related discussion in 1.2.2.3). Finally, while it includes the expanded CITC, continued use of the Campus in Hot Springs may limit the choices to Veterans from non-VA providers in certain instances and may not fully address the geographic access concerns.

### 2.3.6.2 *Employment*

VA BHHCS would employ similar levels of personnel under Alternative F as presently, approximately 357 FTEEs in Hot Springs and 30 FTEEs in Rapid City. Minor changes or the addition/subtraction of certain positions could happen over time based on changes in the volume of patients and the specific services provided at the existing facilities.

### 2.3.6.3 *Estimated Cost*

The estimated cost for Alternative F is \$215,082,431. The cost estimate uses the same methodology and data sources described in Section 2.3.1.3, although no buildings would be mothballed under Alternative F; a cost breakout for Hot Springs and Rapid City facilities is provided in Table 2-9.

**Table 2-9. Estimated Cost Breakout for Alternative F**

Feature	Square footage (GSF)	Estimated 30-Year Life Cycle Cost	Notes
Renovate and maintain existing Hot Springs Campus	458,947 (Hot Springs Campus)	\$203,981,431	Includes total renovation costs of \$59,718,931. FCA estimate for Building 12 is \$11.1 million for all 134,918 GSF. Light renovation estimate uses the Outpatient Clinic Renovation Type factor and is assumed to correct mechanical, systems, accessibility, plumbing and electrical FCA deficiencies.
Continue to lease Rapid City CBOC		\$11,101,000	

Source: Jones Lang LaSalle 2012a.

#### **2.3.6.4 Timeline**

Alternative F represents the continuation of the current approach to health care services in the VA BHHCS. Identified renovation needs for the Hot Springs Campus were assumed to be addressed over the course of a 30-year period, as budgets permit.

### **2.3.7 Supplemental Alternative G – Re-Use by Others of All or Part of Hot Springs Campus**

Under Alternatives A-1, B, and D, VA BHHCS would no longer offer any medical services from the existing Hot Springs Campus and nearly the entire campus could potentially become available for re-use by others. The National Cemetery and appropriate access will always remain under VA ownership and use.

Under Alternatives A-2 and C, VA BHHCS would continue operating from the existing hospital (Building 12) (A-2 includes reuse of a portion of Building 12 only); the domiciliary administration building, dining services, patient wards, and auditorium/library (Buildings 1–8 and 11); one duplex quarters (Building 29); fire/security facility (Building 66); boiler plant (Building 18) and fuel storage tanks; high voltage switchgear building (Building 64); and information resources management building (Building 65). Some or all of the following could potentially become available for re-use by others: the two chapels (Buildings 9–10); buildings previously or currently housing campus/facility support functions (Buildings 13, 14, 17, 23, 30, 31, 35, 42–45, 47, 50, 53, 57, 67, 68, A, B, C); the conservatory (“greenhouse”) (Building 16); bandstand and recreation shelter (Buildings 19 and 62); quarters (Buildings 20, 21, 24–28); and three water reservoirs. (See Figure 3.3-8 for a campus map of the referenced buildings.)

VA currently has several authorities related to use, transfer, or sale of properties including permit to another federal, state, or local governmental agency; license to other entities; enhanced-use lease; *National Historic Preservation Act* Section 111 (historic) lease; in-kind swap for land or facilities in another location; transfer to another federal agency, or to state or local government; and transfer to a Native American tribe.

Re-use of some or nearly all of the Hot Springs Campus could include activities undertaken by nonprofit groups; commercial interests; local, state, or other federal entities; or some combination of these. If potential developers are sought, VA would identify goals for the development. Examples of these uses could include the following, alone or in combination:

- Housing for homeless or at-risk Veterans and their families in accordance with the Building Utilization Review and Repurposing initiative.
- Medical education/research/treatment: Continued VA presence (such as Alternative C) with the remaining portion used for a medical/scientific research program that interacts with or depends on the VA’s continued presence, such as the “Medical Miracle” proposal (VNRC 2014) submitted by the nonprofit Veterans National Recovery Center. The three main elements of this specific proposal are:
  - Minnekahta College of Osteopathic and Regenerative Medicine would “provide education to the cadre of osteopaths, hydro therapists, regenerative medicine experts, and other practitioners necessary to populate the world’s new wave of medical

technology”. Some of the college’s facilities would be located in new construction or repurposed space on the VA Hot Springs Campus under the EUL program, with the remaining facilities in the City of Hot Springs.

- Battle Mountain Research Institute would be partially owned by the Swiss private sector firm Elanix and focus on regulatory clinical studies for regenerative products derived from human stem cells (human fetal tissue). A showcase research project is proposed to be a clinical trial of high quantity mineralized hydrotherapy for treatment of traumatic brain injury, PTSD, and military sexual trauma. A second showcase project is proposed to be clinical trials of four master human progenitor fetal tissue lines for skin, ligaments, tendon, and bone, incorporating application technique, and hydrotherapeutic convalescence. This institute would be located either in the City of Hot Springs or on the VA Hot Springs Campus through the EUL program.
- Battle Mountain Clinic, a part of the medical college, would support medical training at the VA hospital and the clinical research of the Battle Mountain Research Institute (see above) on VA-owned property at or near the VA Hot Springs Campus and leased to the developer through the EUL program

The Medical Miracle proposal calls for initial funding to the nonprofit Veterans National Recovery Center (and through them to the elements listed above) from the public sector and charitable contributions; self-funding the college, research institute, and clinics through tuition, research grants, and contracts; and an endowed foundation supported by a private sector startup firm that deals in regenerative medicine. The proposer estimated the cost to the federal government as \$8 million the first year and a total of \$50 million over five years, and stated that “much of this money will be refunded to the public sector investor and/or other donors after year five and may be treated as a loan for budgeting purposes.” The cost of combining Alternative C with the Medical Miracle version of Alternative G would be \$230–\$280 million over 30 years, for a refund amount ranging from none to all, and assuming no further financial support would be required from VA over this timeframe.

- Continued VA presence with additional renovated housing for single-parent and handicapped Veterans in treatment programs; this could supplement Alternative C and is a component of Alternative E.
- A VA-associated teaching hospital for rural health care providers and housing for students in training.
- Veterans’ education, job training, and related housing.
- Community and economic development such as rental housing, retail, or office space.
- Tourism and recreation such as a vacation resort or museum.
- Campus and facility for higher learning, such as a vocational school, community college, or small university.
- Corporate retreat.

Any options for re-use of the VA Hot Springs Campus buildings or landscape would have to consider and be consistent with preserving the historic significance of the National Historic Landmark.

On July 1, 2015, VA published Solicitation VA10115N0183 seeking expressions of interest for the development of the existing Hot Springs Campus. The announcement included potential use of any of the current VA authorities and requested the submission of organization information, whether the interest is for the entire campus or portion thereof, whether the interest was for a lease or ownership, and the potential funding source for the project. No viable uses were identified as a result of the solicitation. However, VA remains committed to seeking an adaptive reuse for campus buildings not in use and would develop a comprehensive marketing strategy, beginning with an analysis by VA to determine if another department within the agency could utilize the portions or whole of the campus not in use. If another VA cannot be identified or is not successful, VA may consider alternative including other federal agency uses, state or local government uses, Native American uses, and private developer projects, as well as mixed use or multiuser coalitions.

As part of the detailed mitigation measures identified in Chapter 5, VA would develop and implement a marketing strategy to vigorously identify redevelopment partners, including the establishment of an integrated project team (IPT) at appropriate levels across the VA enterprise to evaluate alternative uses not related to delivery of Veteran health care services.

If the buildings or campus would be unoccupied for a period of at least three months, VA has committed to developing and implementing a comprehensive plan for the long-term preservation of the resource. This plan would be developed by a Secretary of the Interior-qualified historic architect. Preservation would continue for at least five years, with an option for VA to review and renew the preservation plan for another five year term if the agency determines such action is in the best interest of the resource. More information about the marketing strategy and the preservation plan are in Section 5.2.

If the agency declines to renew the plan after five years, or after ten if the plan has been renewed, and VA elects not to once again implement comprehensive preservation of campus resources, VA would re-engage in consultation about the VA Hot Springs Campus. This consultation would follow the requirements of NHPA and its implementing regulations at 36 CFR Part 800.

## **2.4 Alternatives Identified But Not Evaluated in Detail**

A NEPA review specifies the purpose of and need for a proposed action, describes the action that the federal agency proposes to meet that purpose and need, and identifies reasonable alternatives to that action. A potential alternative might be eliminated from detailed consideration for many reasons including, but not limited to, if the alternative would not meet the purpose and need, take too long to implement, is not within the agency's purview to implement, would be prohibitively expensive, or would be highly speculative in nature and thus is considered unreasonable.

During the scoping process for this EIS, several alternatives for reconfiguring health care services in the VA BHHCS catchment area were identified or suggested by stakeholders but were not evaluated in detail. Reasons for not including these alternatives in the EIS analysis include that the suggestion does not meet the purpose of and need for the reconfiguration proposal (see Chapter 1), is not within VA's authority to implement, is not able to be defined sufficiently for meaningful analysis, or



is a specific suggestion for services (with no changes to facilities) that is independent of this NEPA review. The alternatives identified but not evaluated in detail include the following:

- Hot Springs should remain open, but ownership and management should be decentralized and transferred to elected boards of veterans using a cooperative or employee-owned model of ownership and control.
- Restore Hot Springs and provide the full services it once offered. Provide more doctors and nurses to expand and continue health care services in Hot Springs
- Close Fort Meade instead of Hot Springs. Return Fort Meade to the SD National Guard.
- Close VA facilities at both Hot Springs and Fort Meade and build a new Department of Defense/VA hospital in one location near Ellsworth Air Force Base or in Rapid City to combine the services.
- Close the VA hospitals in Hot Springs and Fort Meade and consolidate services in Rapid City.
- Keep Hot Springs and Fort Meade open and add a large outreach program with regional hospitals. Use Southern Nevada Veterans Outreach program as a model.
- Open VA CBOCs in other communities (Alliance, Spearfish, others).
- Add a services agreement with Box Butte General Hospital in Alliance to save drive time. (Note: This is one of the 18 critical access hospitals for which purchased care would become available in the proposal for reconfiguring VA BHHCS health services; see Section 2.1).
- Close the VA in Hot Springs and let Veterans go to their own private doctors.
- Develop modern and new medical facilities to attract and retain more qualified staff.
- Expand telemedicine (telehealth) services to reduce time and expense for traveling to receive care.
- Allow Veterans to use available domiciliary space as overnight accommodations when traveling to receive care.

Other comments submitted during scoping were not stand-alone alternatives but pertained to one or more of Alternatives A through G.

## **2.5 Comparison of Environmental Impacts of Alternatives**

The Executive Summary contains a table that summarizes the potential environmental impacts of the evaluated alternatives, by environmental resource, based on the analysis presented in Chapter 4 of this EIS.

## **2.6 Preferred Alternative**

VA BHHCS's preferred alternative is Alternative A-2, which would expand the purchased care options to include 3 tertiary and 26 secondary community providers, and increase the level of case management and coordination services offered to Veterans; construct an MSOC and 100-bed RRTP

facility in Rapid City; renovate Building 12 on the existing Hot Springs Campus to provide a new and updated CBOC and allow VA to maintain a limited presence on campus; , and identify and approve appropriate re-use of the Hot Springs Campus under Supplemental Alternative G. Alternative A-2, with or without Supplemental Alternative G, would fully meet the purpose of and need for action.

## 2.7 Environmentally Preferable Alternative

Based on the potential environmental impacts identified in Chapter 4 and the available mitigation identified in Chapter 5, the environmentally preferable alternative is Alternative F, No Action. This conclusion is based on the following determinations:

- Potential impacts from Alternatives A through E, with mitigation measures applied, would be negligible to minor to aesthetics, noise, land use, floodplains and wetlands, solid waste and hazardous materials, community services, transportation and traffic, utilities, and environmental justice. Alternative F would have no impacts to these resources, with the exception of negligible impacts from ongoing generation of solid waste and hazardous materials, short-term noise during renovations, and continued use of utilities.
- Potential construction-related impacts to air quality, geology and soils, hydrology and water, and wildlife and habitat are generally proportional to the ground surface area disturbed. Alternatives A through E would disturb from 2 to 25 acres. Alternative F would not disturb any ground surface.
- Under Alternatives A1, B, and D, the VA Hot Springs Campus would cease to serve as a Veterans medical center. A lack of Veterans health care on campus impacts the historic character of the Battle Mountain Sanitarium National Historic Landmark through change of use. Redevelopment of the campus (Supplemental Alternative G) by another VA entity would minimize this effect under these alternatives.
- Alternatives A2 and C have the potential to affect the Battle Mountain Sanitarium National Historic Landmark through the proposed expanded operations, renovations, and construction on the VA Hot Springs Campus. These effects could be avoided or minimized if rehabilitation and construction is consistent with the Secretary of the Interior's *Standards for Rehabilitation*. Additionally, under these alternatives, portions of the campus could be redeveloped through Supplemental Alternative G.
- Alternative E has the potential to impact the Battle Mountain Sanitarium National Historic Landmark through the proposed expanded operations, renovations, and construction on the VA Hot Springs Campus. These effects could be avoided or minimized if rehabilitation and construction is consistent with the Secretary of the Interior's *Standards for Rehabilitation*.
- Alternative D has the potential for affecting as-yet unidentified cultural resources from off-campus construction, depending on the locations selected for new facilities.
- Alternative F would have limited effects to historic resources outside the campus and minimal on-campus construction or renovations.



- The redevelopment of the campus by a non-VA entity under Supplemental Alternative G has the potential to impact the historic character of the campus through renovation and construction; these effects would be minimized either by the application of federal historic preservation guidelines (if re-developed by a federal agency) or through preservation conditions (if re-developed by a private company or organization). The full effects of re-development are not known at this time.
- The potential effects of off-site construction (in Rapid City or at another location in Hot Springs) have the potential to affect built and subsurface historic properties and cultural resources. The impacts of this construction are not known at this time and may require consultation under Section 106 of the NHPA.

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## **3.0 AFFECTED ENVIRONMENT**

Each section of this chapter addresses one of the 15 environmental resources or issues for which impacts are assessed in this environmental impact statement (EIS):

- Aesthetics
- Air quality
- Cultural resources and historic properties
- Geology and soils
- Hydrology and water quality
- Wildlife and habitat
- Noise
- Land use
- Floodplains and wetlands
- Socioeconomics
- Community services
- Solid waste and hazardous materials
- Transportation and parking
- Utilities
- Environmental justice

The regulatory and policy framework relevant to each resource is summarized, and the existing conditions are described; these discussions provide a current baseline for analyzing potential impacts. The last subsection of this chapter lists the projects and activities ongoing or proposed in the Rapid City and Hot Springs areas, regardless of who is implementing them, that could contribute to cumulative impacts with VA's proposal.

## 3.1 Aesthetics

Aesthetics include the physical (natural and manmade) and biological features of the landscape that contribute to the visual character or scenic quality of an area. Scenic quality is a measure of the visual appeal of the landscape, which is subjective and varies among observers. A viewshed is the area that is visible from a specified location.

### 3.1.1 Regulatory and Policy Framework

There are no federal standards relating to aesthetics or visual resources that apply to Department of Veterans Affairs (VA) actions. In carrying out its federal functions, VA is not subject to state or local regulations absent a clear statutory waiver to the contrary. This concept is based upon the Supremacy Clause (Article VI) of the U.S. Constitution. Although local governments cannot regulate activities of the federal government on federally owned land, federal agencies must consider local requirements for aesthetic qualities of new building construction (40 United States Code 619(b)). VA actions on non-federal land are subject to the regulatory jurisdiction of the landowner, including local plans or codes pertaining to aesthetics.

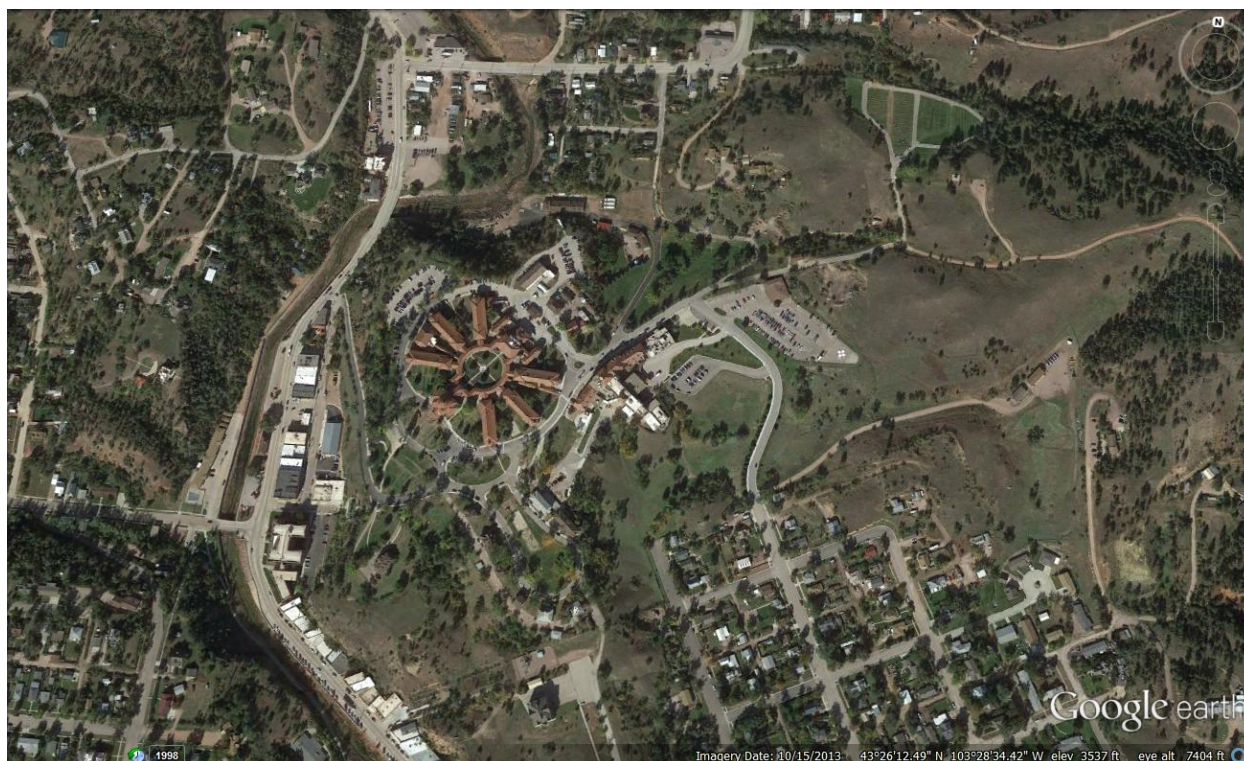
A viewshed, as it pertains to the setting of a historic property, is evaluated in accordance with regulations implementing Section 106 of the *National Historic Preservation Act* (NHPA) (see Section 3.3).

### 3.1.2 Current Conditions

#### 3.1.2.1 VA Hot Springs Campus

##### 3.1.2.1.1 Setting and Landscape

The VA Hot Springs Campus occupies approximately 68 acres atop a bluff overlooking the Fall River to the north, west, and south; and the Hot Springs business district and the historic River Street to the southwest. The red-hued bluffs and canyon walls of the Fall River are visible to the north and west. Large stately houses built by prominent Hot Springs residents during the late nineteenth and early twentieth century are visible on the wooded bluff opposite the campus to the west. An aerial view of the campus is shown in Figure 3.1-1.



**Figure 3.1-1. Aerial View of VA Hot Springs Campus and Landmarks.**

The Battle Mountain landform, for which the early-day sanitarium was named, rises to about 4,400 feet in elevation to the east of the campus. At approximately 3,560 feet in elevation, the campus sits about 100 feet above the Fall River channel and about 840 feet lower than the Battle Mountain peak.

The original hospital, wards, administration building, quarters, and some of the support buildings were constructed on the bluff plateau, with the original hospital complex and the governor's quarters occupying the highest and most prominent locations. The site slopes down toward the northeast at the rear of the original hospital complex, which reduced the visibility of the support buildings (conservatory, stable, carriage house, power plant, and root cellar) from the hospital and wards.

Hot Springs National Cemetery covers approximately nine acres on the campus at the foot of Battle Mountain. The north sloping site provides an open view to the hills to the northeast. Located about a quarter mile northeast of the Administration Building, the cemetery location is largely out of view from the occupied buildings on the campus.

Very little vegetation screened the campus from the community below when the sanitarium buildings were constructed, but today mature vegetation on the slopes of the bluff and on the campus blocks many views to and from the campus.

Sources of nighttime light on the campus include street lights and security lights around buildings and hospital parking lot.

Figure 3.1-2 shows representative photos of the VA Hot Springs Campus setting.





View to east of Battle Mountain; Battle Mountain Monument in Hot Springs National Cemetery visible at picture center.



View to west of VA Hot Springs Campus and national cemetery.

### Figure 3.1-2. Representative Photos of the Setting and Landscape

#### 3.1.2.1.2 Buildings and Architecture

The picturesque road layout reflects the era's appreciation for naturalistic settings (NPS 2010). Curving roads encircle the original hospital complex and the residential area.

The original hospital complex was designed around a circular courtyard with a prominent administration center (Building 1) and service buildings (Buildings 2, 9, and 10), and six hospital wards (Buildings 3 through 8) connecting as rectangular spokes. The architecture is a Mission/Spanish Colonial style that incorporated elements of the Romanesque architecture that was visible in the town of Hot Springs at the time of construction (NPS 2010). The buildings were constructed from local sandstone, and featured massive walls, bands of arched and deeply recessed windows, and arched entries. The combination of the different architectural styles with the use of

local sandstone and red tile roofs created a particularly attractive facility in a striking location at the top of the bluff.

The hospital annex (Building 12) was constructed later, completed in 1926, and a number of additions to the building have been constructed over the years. The original structure, with a design similar to Buildings 1 through 10, had eight bays of varying heights. It was built of sandstone with a red tile roof, but the additions have been constructed with different materials. The later additions to the hospital are south and east of the original structure, and because of elevation are not very visible from the original hospital complex.

The stairway linking the historic business district of Hot Springs to the grounds of the campus, referred to as the Grand Staircase, was constructed in 1915 of pink sandstone and concrete with lampposts and black iron railings. The ornamental staircase splits into two stairways about half-way to curve around an area with a fountain (no longer functioning) and landscaping. The stairways rejoin at the next landing to continue to the top.

The staff quarters and the governor's quarters that were constructed in 1907 were laid out in a loop along the southwest edge of the bluff. The quarters have a Colonial/Tudor architectural mix and are wood construction on sandstone foundations. The duplex quarters constructed in the 1920s have Neoclassical/Classical architecture and are wood frame construction on sandstone foundations. Landscaping of trees and shrubs surround the quarters.

The main entrance road to the campus from North 5<sup>th</sup> Street has views of Battle Mountain to the east and is lined with mature trees on the west.

Figure 3.1-3 shows representative photos of the buildings on the VA Hot Springs Campus.



View to east of Administration Building 1.



View to west of Domiciliary Building 8.

**Figure 3.1-3. Representative Photos of VA Hot Springs Campus Buildings.**





View to west of rear of Hospital Building 12.



View to east of Grand Staircase from National Avenue.

**Figure 3.1-3. Representative Photos of VA Hot Springs Campus Buildings (continued).**

### **3.1.2.2      *City of Hot Springs***

The City of Hot Springs sits in the canyon of Fall River at the base of Battle Mountain to the east, Seven Sisters Range to the south, and Hot Brook and Cold Brook canyons to the north-northwest. The visual appeal of the city is the surrounding sandstone cliffs and evergreen forests. Most of the oldest part of the city is designated as a historic district and maintains many of the original buildings constructed to support the city's early days as a resort destination for the therapeutic warm waters in the area. The historic River Street business area is characterized by Richardsonian Romanesque buildings constructed of pink sandstone from Fall River County quarries. The newer areas of Hot Springs are typical of more modern buildings and houses.

Sources of nighttime light throughout the city include street lights and security lights for buildings and parking lots.

### **3.1.2.3      *City of Rapid City***

Rapid City, called the gateway to the intermountain west, is set against the eastern slope of the Black Hills. The city was initially established along Rapid Creek and has expanded to a larger area that is divided by a mountain range into eastern and western parts. The visual appeal of the city is the mountain range to the west, the plains to the east, parkland along Rapid Creek, and the redevelopment and preservation of the city's historic core. Rapid City includes business and housing areas that are typical of an urban community with surrounding suburban and rural neighborhoods.

Sources of nighttime light throughout the city include street lights and security lights for buildings and parking lots.

## 3.2 Air Quality

This section describes the air quality regulations applicable to the proposed action and the regional air quality in the VA Black Hills Health Care System (BHHCS) catchment area.

### 3.2.1 Regulatory and Policy Framework

#### 3.2.1.1 National Ambient Air Quality Standards

As required by the *Clean Air Act*, the U.S. Environmental Protection Agency (EPA) set National Ambient Air Quality Standards (NAAQS) for selected criteria pollutants considered harmful to public health and the environment: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter (PM), and lead (40 Code of Federal Regulations [CFR] Part 50), with an averaging time and data form for determining compliance specific to each standard. Primary NAAQS are limits set to protect public health, including the health of “sensitive” populations such as asthmatics, children, and the elderly. Secondary NAAQS protect public welfare, including protection against visibility impairment and damage to animals, crops, vegetation, and buildings.

Based upon ambient air quality monitoring data, U.S. EPA designates areas within each state as:

- in **attainment** for those NAAQS that are being met;
- in **non-attainment** for any NAAQS that are being exceeded;
- in **maintenance** if the area was reclassified from non-attainment to attainment and is therefore subject to an EPA-approved maintenance plan; or
- **unclassified** if no determination has been made.

For areas of non-attainment, a federally enforceable state implementation plan is implemented with the goal of achieving attainment.

“General conformity” requirements apply to all federal actions (EPA 2014a). The purpose of the General Conformity Rule is to ensure that:

- Federal activities do not cause or contribute to a new violation of a NAAQS
- Actions do not cause additional or worsen existing violations of or contribute to new violations of the NAAQS
- Attainment of the NAAQSs is not delayed

The general conformity regulations (40 CFR 93 Subpart B) establish *de minimis* thresholds for criteria pollutants and precursors. A “conformity determination” is required for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by a federal action would equal or exceed any of the *de minimis* thresholds (40 CFR 93.153(b)).

### 3.2.1.2 Clean Air Act Title V Operating Permit Requirements

Title V of the *Clean Air Act* regulates emissions of 188 specific hazardous air pollutants (HAPs) (40 CFR Part 70). Sources that meet the definition of a “major source” of either the criteria pollutants (regulated by the NAAQS) or HAPs must apply for and obtain a Title V operating permit. For HAPs a major source is one that has the potential to emit more than 10 tons per year of any individual HAP, or 25 tons per year of any combination of HAPs. For criteria pollutants, the definition of a major source depends on the region’s attainment status: in an attainment area, a major source is one that has a potential to emit more than 100 tons per year of any criteria pollutant, with more restricted levels at various classifications of non-attainment for some criteria pollutants (40 CFR 70.2).

The South Dakota Department of Environment and Natural Resources (SDDENR) issued the Title V permit for the Hot Springs Campus, Permit #28.0102-27 (SDDENR 2013), effective from March 4, 2014 until SDDENR takes final action on the current application for renewal. Units covered by the Title V permit are described in Table 3.2-1.

**Table 3.2-1. Description of Title V Permitted Units**

Unit	Description	Maximum Operating Rate
3	Boiler #3 – 1974 Nebraska boiler, water tube model, fired with distillate oil	20.4 million BTU per hour heat input
4	Boiler #4 – 2004 Hurst boiler fired with distillate oil	7.5 million BTU per hour heat input
5	Boiler #1 – 2008 Cleaver Brooks boiler, model CEW-101-500-150, fired on distillate oil	20.4 million BTU per hour heat input
6	Boiler #2 – 20 II Cleaver Brooks CEW-101500-200ST, 500 horsepower, fired on distillate oil	20.4 million BTU per hour heat input
7	Emergency generator # 1, Gen-Dom-1998 Generac 98A 032195, fired on distillate oil	80 kilowatts, 60 horsepower
8	Emergency generator #2, Gen-BP-1997 Cummins Onan 230DF AB, fired on distillate oil	230 kilowatts, 172 horsepower
9	Emergency generator #3, Gen-Hosp-2001 Generac 1740510100 Type SD400, fired on distillate oil	400 kilowatts, 298 horsepower

Note: BTU = British thermal unit.

Source: SDDENR 2013.

### 3.2.1.3 New Source Review

The New Source Review (NSR) permitting program, under Title I of the *Clean Air Act*, is a preconstruction permitting program that assures that air quality is not degraded by new stationary emission sources or modified old sources. There are three types of permits issued under this program (EPA 2015a):

- “Prevention of Significant Deterioration” NSR permits are required for new major sources or a major source making a major modification in an attainment area or unclassified area

- Nonattainment NSR permits are required for new major sources or major sources making a major modification in a nonattainment area
- Minor source NSR permits for new construction or modifications with emissions that do not meet the thresholds of major sources

### **3.2.1.4 State and Local Regulations and Coordination**

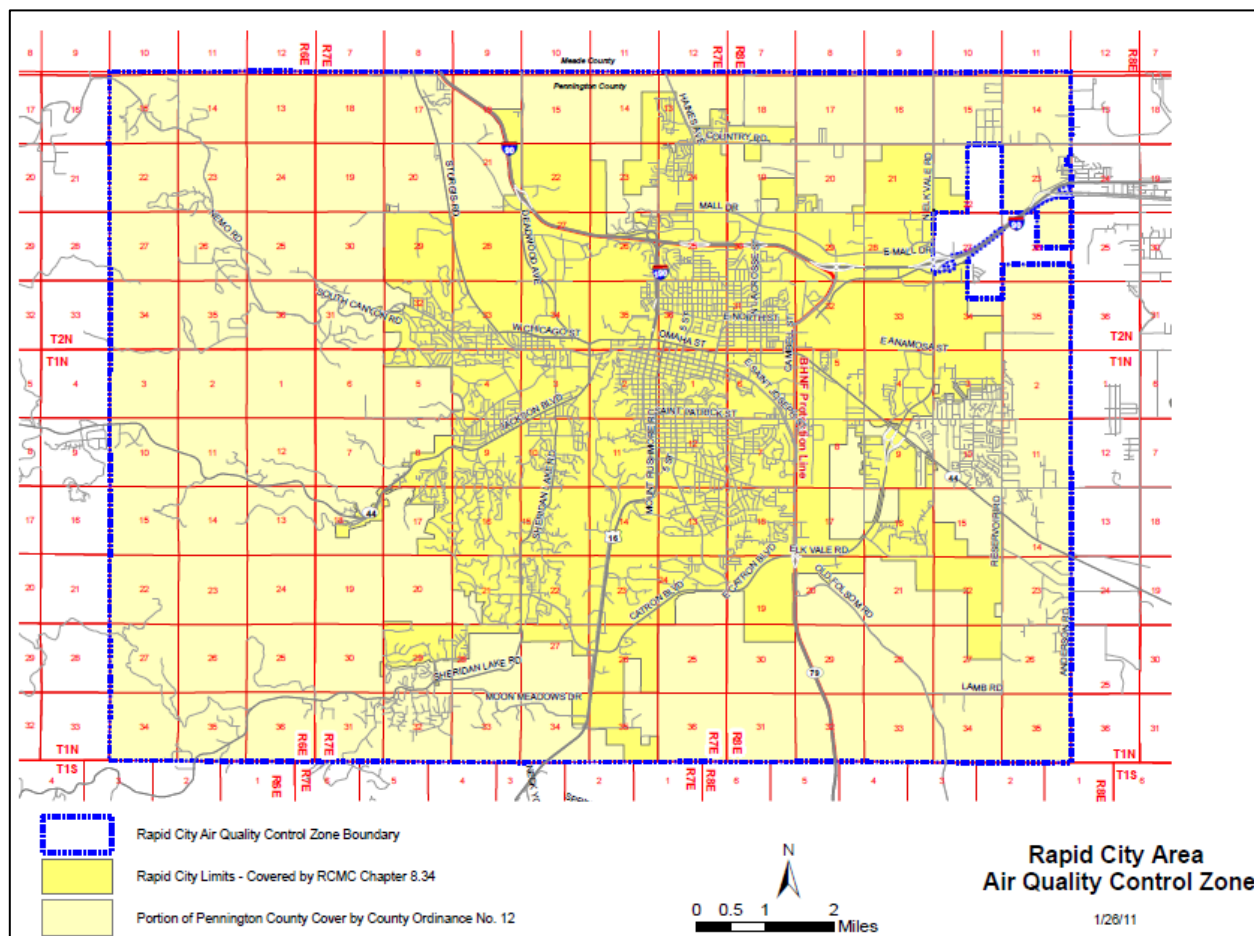
States may establish air quality standards that are more stringent than the federal standards (40 CFR 50.2), but South Dakota has adopted the federal standards. Air quality laws are included in South Dakota Codified Laws Section 34A-1, and rules for the state program are contained in the South Dakota Administrative Rules Section 74:36. State-wide air compliance and enforcement activities are coordinated by the SDDENR Air Quality Program.

South Dakota is a member state of the Western States Air Resources Council, which addresses air quality issues of regional concern (WESTAR 2014) and the Western Governors' Association initiative on weather and climate risk (Western Governors' Association 2014).

For project activities in the Rapid City area, the Pennington County Department of Ordinance Enforcement implements procedures for the enforcement of county ordinances relating to environmental and resource issues, among other issues. The only air quality-related ordinance is Pennington County Ordinance No. 12, *Fugitive Emissions and the Abatement of Smoke*. This ordinance applies to construction (and other activities) in a limited area of Pennington County.

Rapid City may administer an air quality control program within its jurisdiction, in accordance with South Dakota Codified Laws 34A-1-36. The Rapid City Air Quality Control Board works to maintain compliance with the NAAQS, especially particulate matter. The Rapid City Air Quality Control Board achieves its goals through programs to control, abate, and educate about fugitive dust emissions and smoke from wood burning and open burning (Rapid City 2014). Rapid City's air quality is regulated under Rapid City Code of Ordinance 8.34-*Fugitive Emissions and the Abatement of Smoke*. Figure 3.2-1 shows Rapid City air quality control zones.

No Fall River County or City of Hot Springs ordinances specifically address air quality issues.



Source: RCAQD 2014.

Figure 3.2-1. Rapid City Air Quality Control Zones

## 3.2.2 Current Conditions

Construction and operation of new facilities, and discontinued use of existing facilities, could occur in Hot Springs (Fall River County) and Rapid City (Pennington County) under Alternative A through G; therefore, the air quality analysis in this EIS focuses on these two counties.

### 3.2.2.1 Regional Climate

Weather and climate are important influences on air resources in this region. Cold weather limits the range of pollution control options available, and high winds in the area contribute to pollutant dispersion. Rapid City sits at an elevation of 3,250 feet and Hot Springs sits at an elevation of 3,448 feet. The climate of this region is classified as mid-latitude steppe according to the Koppen climate system and is characterized by arid summers and dry winters (NWS 2014). Average minimum and maximum temperatures measured at the Rapid City Weather Forecast Office are 16.4 and 37.4 degrees Fahrenheit in January and 61.7 and 84.3 degrees Fahrenheit in July. Average minimum and maximum temperatures in Hot Springs are similar: 14.4 and 41.3 degrees Fahrenheit in January and 57.2 and 89.2 degrees Fahrenheit in July. The average annual precipitation is 17.7 inches in Hot



Springs and 19.8 inches in Rapid City. Both locations show similar monthly rainfall patterns, with May typically being the wettest month and January the driest month (NCDC 2014a, 2014b). Prevailing winds are from the north and northwest, with average daily wind speeds ranging from 10 to 13 miles per hour (Cedar Lake Ventures, Inc. 2014).

Geography also has a particular influence on air quality in Rapid City, as summarized by SDDENR: “Western Rapid City lies in the middle of the geological formation termed the limestone racetrack that surrounds the Black Hills National Forest. It is bordered on the west and south by the Black Hills and on the east by a series of hogback hills creating a bowl-like formation ideal for air pollution problems” (SDDENR 1998). Air quality is poor when winter temperature inversions (cold air trapped below warm air) occur in this area (RCAQD 2014).

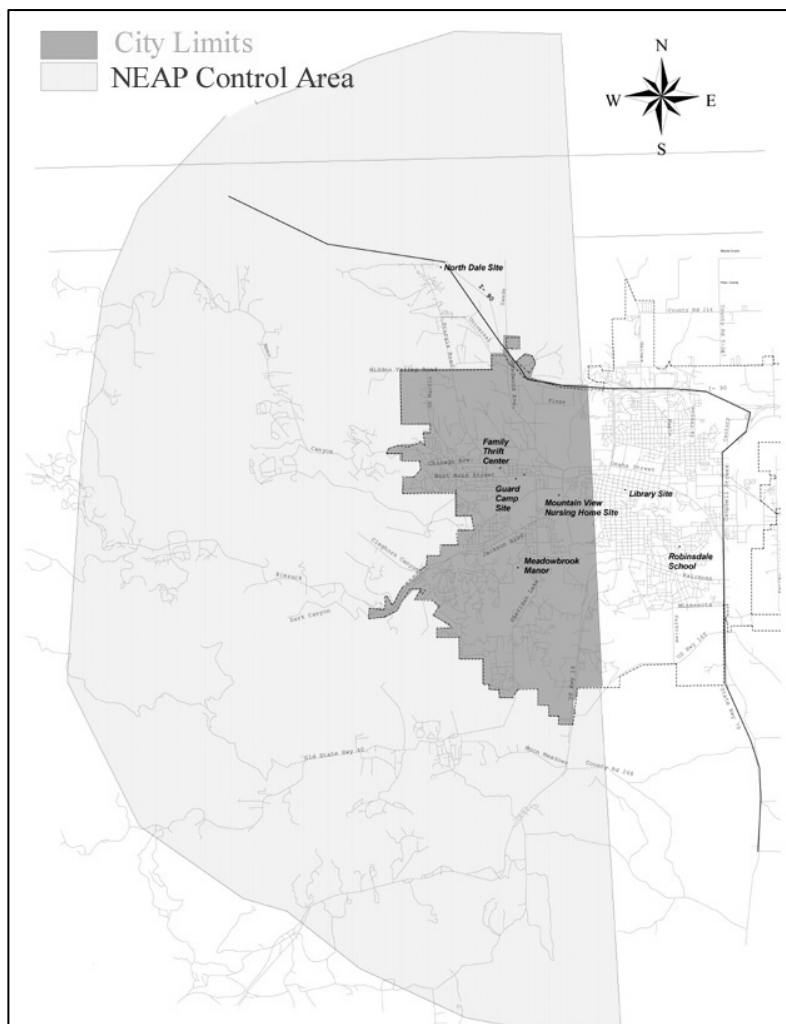
### **3.2.2.2      *Regional Attainment Status for National Ambient Air Quality Standards***

The project area includes the counties of Fall River and Pennington, SD. The region for which the U.S. EPA designates NAAQS attainment is the “Black Hills-Rapid City Intrastate Air Quality Control Region (South Dakota)” which consists of the South Dakota counties of Butte, Custer, Fall River, Lawrence, Meade, and Pennington (40 CFR 81.214). From 1978 to 1991, part of Pennington County was designated in nonattainment for the particulates standard that was in place at the time (EPA 2014b). Since then, the region has been designated as unclassified or in attainment for all criteria pollutants. At this time, there are no designated maintenance or non-attainment areas in South Dakota for any criteria pollutants (EPA 2014c, 2015b).

Though the region is currently in attainment for all criteria pollutants, particulate pollution has historically been a problem in the Rapid City area. In 1978, the area around Rapid City (before the current air quality control region was defined) was designated as non-attainment for a NAAQS for total suspended particulates that is no longer in effect (EPA 2014b). Since then, the area has had several exceedances of the NAAQS for particulate matter less than 10 micrometers in diameter (PM<sub>10</sub>). In 1992, there were two exceedances of the PM<sub>10</sub> standard that was promulgated in 1986 that did not violate the NAAQS because the form of the standard is “not to be exceeded more than once per year on average over 3 years”. In 1996, there were three exceedances, followed by a fourth in 1997, triggering a review process by EPA. Additional exceedances of the PM<sub>10</sub> standard were measured in Rapid City in 2000, in 2001, and twice in 2002 (RCAQD 2014). Still, the area is designated as in attainment for all particulate matter NAAQS due to an EPA policy of allowing exclusion of PM<sub>10</sub> air quality data that are attributable to natural events (volcanic and seismic activity, wildland fires, or high wind events) (Nichols 1996). To qualify for this exclusion, the SDDENR developed a Natural Events Action Plan, and sources that contribute to fugitive dust emissions must install and implement best available control measures (SDDENR 1998, 2005). The state plan was approved by EPA in 1998 and updated in 2005. Best available control measures were developed for industrial fugitive dust sources in the west Rapid City area to which the plan applies (Figure 3.2-2) and are federally enforceable through the facility’s minor source permits. High wind dust alerts are called when all of the following conditions are forecast, although they may be (and have been at times) called when only one or two of the conditions are expected:

- Hourly wind speeds exceed 20 miles per hour
- Peak wind gusts are greater than 40 miles per hour
- Five consecutive days of 0.02 inches or less of precipitation each day excluding dry snow

The fugitive dust emissions sources are individually notified of high wind dust alerts. During alerts, the SDDENR requests that construction activities be ceased or minimized, or that the facilities use additional measures to prevent fugitive dust. Restrictions on construction activities are voluntary (SDDENR 2005).



Source: SDDENR n.d.

Figure 3.2-2. Natural Events Action Plan Control Area.

### 3.2.2.3 Emission Sources

#### 3.2.2.3.1 Regional Sources

The National Emission Inventory provides estimates of criteria and hazardous air pollutant emissions from all air emissions sources. The latest available National Emissions Inventory is from 2011. At the time of this writing, the 2014 inventory, the next inventory to be completed in the three-year cycle, is not yet available (EPA 2015c). Economic sectors emitting more than 100 tons per year of a pollutant in Pennington County or Fall River County are shown in Table 3.2-2.



**Table 3.2-2. 2011 National Emissions Inventory Data**

Pollutant	Economic Sectors Emitting More than 100 Tons per Year (aggregated for all sources in county)	
	Pennington County	Fall River County
Acetaldehyde	biogenics (vegetation and soil), commercial cooking, agricultural field burning, prescribed fire, wildfire, electric generations, industrial boilers, residential fuel combustion, oil and gas production, pulp and paper, mobile sources, solvent use, waste disposal	biogenics (vegetation and soil), commercial cooking, agricultural field burning, prescribed fire, wildfire, residential fuel combustion, oil and gas production, mobile sources, waste disposal
Ammonia	fertilizer application, livestock waste, prescribed fire	fertilizer application, livestock waste, wildfire
Benzene	bulk gasoline terminals, commercial cooking, agricultural field burning, prescribed fire, wildfire, electric generations, industrial boilers, residential fuel combustion, gas stations, oil and gas production, mobile sources, solvent use, waste disposal	bulk gasoline terminals, commercial cooking, agricultural field burning, prescribed fire, wildfire, residential fuel combustion, gas stations, oil and gas production, mobile sources, waste disposal
Carbon dioxide	prescribed fire, wildfire, mobile sources	prescribed fire, wildfire, mobile sources
Carbon monoxide	biogenics (vegetation and soil), agricultural field burning, prescribed fire, wildfire, residential wood combustion, cement manufacturing, industrial processes not elsewhere classified, mobile sources, waste disposal	biogenics (vegetation and soil), agricultural field burning, prescribed fire, wildfire, mobile sources
Formaldehyde	biogenics (vegetation and soil), commercial cooking, agricultural field burning, prescribed fire, wildfire, electric generations, industrial boilers, residential fuel combustion, oil and gas production, pulp and paper, mobile sources, solvent use, waste disposal	biogenics (vegetation and soil), commercial cooking, agricultural field burning, prescribed fire, wildfire, fuel combustion, oil and gas production, mobile sources, waste disposal
Hexane	bulk gasoline terminals, prescribed fire, wildfire, electric generations, residential fuel combustion, gas stations, oil and gas production, mobile sources, solvent use, waste disposal	bulk gasoline terminals, prescribed fire, wildfire, residential fuel combustion, gas stations, oil and gas production, mobile sources, solvent use
Methane	prescribed fire, wildfire	prescribed fire, wildfire
Methanol	biogenics (vegetation and soil), oil and gas production, pulp and paper, aircraft, solvent use, waste disposal	biogenics (vegetation and soil), oil and gas production, aircraft, solvent use, waste disposal
Nitrogen oxides	biogenics (vegetation and soil), prescribed fire, coal-fired electricity generation, residential natural gas use, cement manufacturing, industrial processes not elsewhere classified, mobile sources	biogenics (vegetation and soil), wildfire, mobile sources
PM <sub>10</sub>	agriculture, construction, dust from paved roads, dust from unpaved roads, prescribed fire, wildfire, waste disposal	agriculture, dust from unpaved roads, prescribed fire, wildfire, mining

**Table 3.2-2. 2011 National Emissions Inventory Data (continued).**

<b>Pollutant</b>	<b>Economic Sectors Emitting More than 100 Tons per Year (aggregated for all sources in county)</b>	
	<b>Pennington County</b>	<b>Fall River County</b>
Particulate matter less than 2.5 micrometers in diameter	agriculture, construction, dust from paved roads, dust from unpaved roads, prescribed fire, wildfire	prescribed fire, wildfire
Sulfur dioxide	prescribed fire, coal-fired electricity generation, cement manufacturing	wildfire
Toluene	bulk gasoline terminals, commercial cooking, agricultural field burning, prescribed fire, wildfire, electric generations, industrial boilers, residential fuel combustion, gas stations, oil and gas production, mobile sources, solvent use, waste disposal	bulk gasoline terminals, commercial cooking, agricultural field burning, prescribed fire, wildfire, residential fuel combustion, gas stations, oil and gas production, mobile sources, solvent use, waste disposal
Volatile organic compounds	biogenics (vegetation and soil), bulk gasoline terminals, prescribed fire, wildfire, gas stations, pulp and paper, mobile sources, consumer and commercial solvent use, industrial surface coating and solvent use, nonindustrial surface coating, waste disposal	biogenics (vegetation and soil), prescribed fire, wildfire, mobile sources

Source: EPA 2015c.

### 3.2.2.3.2 VA BHHCS Facility Emissions

Fuel combustion and construction/maintenance activities at VA BHHCS medical facilities produce air emissions. Specifically, four boiler units (fed with distillate fuel oil) and three emergency generators (fed with distillate fuel oil) at the Hot Springs Campus are permitted under Title V Air Quality Permit Number 28.0102-27. The Title V permit specifies the maximum operating rate for each unit, and requires recordkeeping for the volume and sulfur content of the distillate fuel oil burned in the boilers and the number of hours each unit is in operation. Additionally, the Title V permit specifies limits for visible emissions, total suspended particulate emissions, and sulfur dioxide emissions. The campus is currently in compliance with the Title V permit conditions.

Construction and maintenance activities also produce air emissions, including total suspended particulate and fuel combustion by-products. These mobile sources are not individually permitted, and their operation is not continuous. Proper equipment maintenance prevents unacceptable emissions from these mobile sources.

Emissions from contracted and leased facilities, such as the existing Rapid City CBOC, are not regulated by VA air quality permits.

### 3.2.2.3.3 Greenhouse Gas Emissions

Annual greenhouse gas (GHG) emissions attributable to existing VA BHHCS operations can be estimated using accounting tools developed by the GHG Protocol. Three scopes of GHG emissions are defined as follows (WRI 2004):

- Scope 1: Direct GHG Emissions – GHG emissions from sources that are owned or controlled by the reporting entity, including fuel consumption and operation of fleet vehicles.
- Scope 2: Electricity Indirect GHG Emissions – GHG emissions from the generation of purchased electricity consumed by the reporting entity.
- Scope 3: Other Indirect GHG Emissions – GHG emissions from activities of the reporting entity but from sources not owned or controlled by the reporting entity, including employee commuting, use of services, and waste transportation and disposal.

**Scope 1:** Direct GHG emissions from operation of the existing VA BHHCS facilities predominantly include the consumption of #2 fuel oil (Hot Springs Campus) and natural gas (Rapid City CBOC). In FY 2014, Hot Springs Campus operations consumed 438,765 gallons of #2 fuel oil (VA 2015). The Rapid City CBOC is one tenant located within a leased facility, and natural gas consumption for CBOC operations is not available. However, direct GHG emissions estimates were assumed to be primarily attributable to Hot Springs Campus operations as the Rapid City CBOC is a significantly smaller facility and fuel consumption is likewise significantly smaller.

Operation of fleet vehicles for landscaping and facility maintenance at the Hot Springs Campus also accounts for GHG emissions; however, such GHG emissions were assumed to be negligible when compared to GHG emissions from #2 fuel oil consumption and were not included in the facility estimate.

The Scope 1 GHG emissions calculation tool developed for the service sector by the GHG Protocol was used to estimate direct GHG emissions (WRI 2016). FY 2014 Scope 1 GHG emissions from existing Hot Springs Campus operations are calculated at 4,471 metric tons of carbon dioxide equivalents (t CO<sub>2</sub> eq) (LEI 2016a).

**Scope 2:** In FY 2014, Hot Springs Campus operations consumed 6,275,920 kWh of electricity supplied by Black Hills Power (VA 2015). The Rapid City CBOC is one tenant located within a leased facility, and electricity consumption for CBOC operations is not available. However, electricity indirect GHG emissions estimates were assumed to be primarily attributable to Hot Springs Campus operations as the Rapid City CBOC is a significantly smaller facility and electricity consumption is likewise significantly smaller.

The Scope 2 GHG emissions calculation tool developed for the service sector by the GHG Protocol was used to estimate electricity indirect GHG emissions (WRI 2016). FY 2014 Scope 2 GHG emissions from existing Hot Springs Campus operations are calculated at 4,396 t CO<sub>2</sub> eq (LEI 2016b).

**Scope 3:** Other indirect GHG emissions predominantly include vehicular emissions from commuting VA employees and vehicular emissions from patient use of VA services. Transportation and ultimate disposal of VA-generated wastes were assumed to be negligible when compared to GHG emissions from other transportation sources and were not included in the facility estimate.

The Scope 3 GHG emissions calculation tool developed for the service sector by the GHG Protocol was used to estimate other indirect GHG emissions from sources including employee commuting and patient transportation (WRI 2016). Several assumptions were made to determine the estimated

annual vehicular mileage (LEI 2016c). FY 2014 Scope 3 GHG emissions from existing Hot Springs Campus operations are calculated at 1,445 t CO<sub>2</sub> eq (LEI 2016d).

The total FY 2014 GHG emissions from existing Hot Springs Campus operations are estimated at 10,312 t CO<sub>2</sub> eq, or approximately 0.033 percent of the total GHG emissions for the state of South Dakota (CAIT 2016).

### 3.3 Cultural Resources and Historic Properties

Cultural resources, including historic properties, are nonrenewable representations of our human past and heritage. The regulatory setting for these resources and their relationships to federal actions and undertakings are presented below, followed by background on their identification, areas of potential effects (APEs), consultation and outreach, and cultural background. Specific attention is given to historic properties of religious and cultural significance, historic districts, and to National Historic Landmarks (NHLs) (ACHP 2015).

#### 3.3.1 Regulatory and Policy Framework

For purposes of analysis under the *National Environmental Policy Act* (NEPA), cultural resources encompass “historic properties” as defined in the NHPA, “archaeological resources” as defined in the *Archaeological Resources Protection Act*, and “cultural items” as defined in the *Native American Graves Protection and Repatriation Act*. NEPA provides an overarching consideration of the human environment to address these cultural, historic, and archaeological resources, properties, and items (collectively referred to as “cultural resources” herein).

“Historic properties” defined by the NHPA are any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP) maintained by the Secretary of the Interior. A historic property may include artifacts, records, and remains related to and located within such property, and properties of traditional religious and cultural importance to an Indian tribe or other identifiable cultural community that meet the NRHP criteria.

The regulations implementing Section 106 of the NHPA encourage the coordination of reviews under Section 106 with concurrent reviews under NEPA, the *Archaeological Resources Protection Act*, the *Native American Graves Protection and Repatriation Act*, and other authorities (36 CFR 800.3(c)). VA is following the substitution process of 36 CFR 800.8(c) to meet the Section 106 review requirements for cultural resources and historic properties for this federal action and undertaking. This means that VA is using the information and documentation required to prepare the EIS and record of decision for the reconfiguration proposal to comply with Section 106 in place of the procedures in 36 CFR 800.3 through 800.6.

#### 3.3.2 Cultural Resource and Historic Property Identification

VA BHHCS applied the following approach to identify historic properties within the study area defined as the BHHCS service area (see Figure 1-1 in Section 1.1). This approach is based on the Council on Environmental Quality and Advisory Council on Historic Preservation guidance for integrating NEPA and Section 106 (CEQ/ACHP 2013).

- Establish, in consultation with the State Historic Preservation Office (SHPO), the APEs for the various alternatives of the reconfiguration proposal.
- Seek information from SHPO, other consulting parties including tribal and local governments, and appropriate archives for known and potential historic properties within those APEs.

- Consult with SHPO and other consulting parties to determine NRHP eligibility for identified cultural resources in the APEs, and confirm for those already NRHP-listed properties their retention of significance, integrity, and character-defining features.
- Establish, in consultation with the Section 106 consulting parties, the phased approach to identifying and evaluating potential historic properties at places selected in the future for new facilities associated with the alternatives.

### **3.3.3 Areas of Potential Effects for Historic Properties**

Within the VA BHHCS service area and EIS study area, VA initially identified two geographic areas (APEs) where the reconfiguration proposal could alter the character or use of historic properties. These APEs encompass the cities of Hot Springs and Rapid City (see Figure 1-1 in Section 1-1 for the locations of these cities within the VA BHHCS service area).

The Hot Springs APE (Figure 3.3-1) includes the VA Hot Springs Campus and potential but as-yet unidentified locations for new VA facilities proposed under some of the EIS alternatives.

The Rapid City APE (Figure 3.3-2) includes the potential but as-yet unidentified locations for new VA facilities under some of the EIS alternatives.

The alternatives propose construction (new buildings or modifications to existing buildings) at locations yet to be identified in Hot Springs and Rapid City. When identified, these locations would receive phased review under the Section 106 process following 36 CFR 800.4(b)(2), and APEs would be revised, as necessary. VA would continue to adhere to Section 106 and guidelines in VA's cultural resource management procedures (VA 2011) during future planning and actions involving acquisition and construction of properties.

In addition, the Fort Meade VA Campus has been added to the APE as a site of known historic properties (see Figure 3.3-3), although no physical changes to this location are planned as part of the proposed reconfiguration. The APE was expanded to include the Fort Meade VA Campus in response to Consulting Party comment and is consistent with the EIS study area for cultural resources which includes the entire VA BHHCS service area. Fort Meade VA is an active medical center that recently underwent construction to conform to modern healthcare needs, and will likely require modifications in the future for the same reason. However, neither the current construction nor any future undertaking at the VA Fort Meade campus are related to the actions being evaluated in this EIS. Therefore, the proposed reconfiguration would have no effect on historic properties within the Fort Meade campus. VA continues to consider the entire VA BHHCS service area as the EIS study area for cultural resources. No connected actions have been identified at other locations within the service area where effects from the proposed reconfiguration would extend; thus, no expansion is made to the APEs beyond the areas of Hot Springs, Rapid City, and the Fort Meade VA Campus.



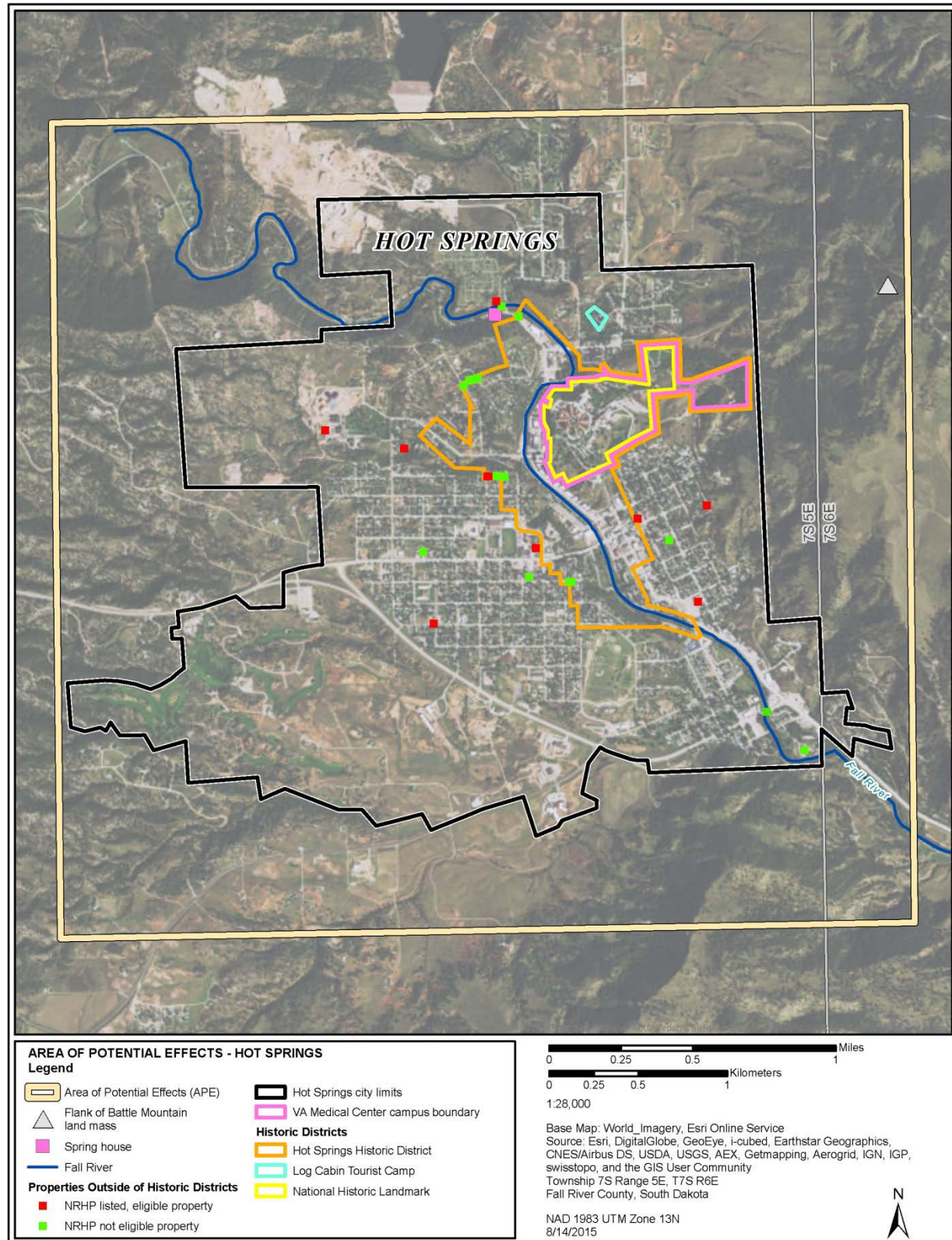


Figure 3.3-1. Area of Potential Effects – Hot Springs.



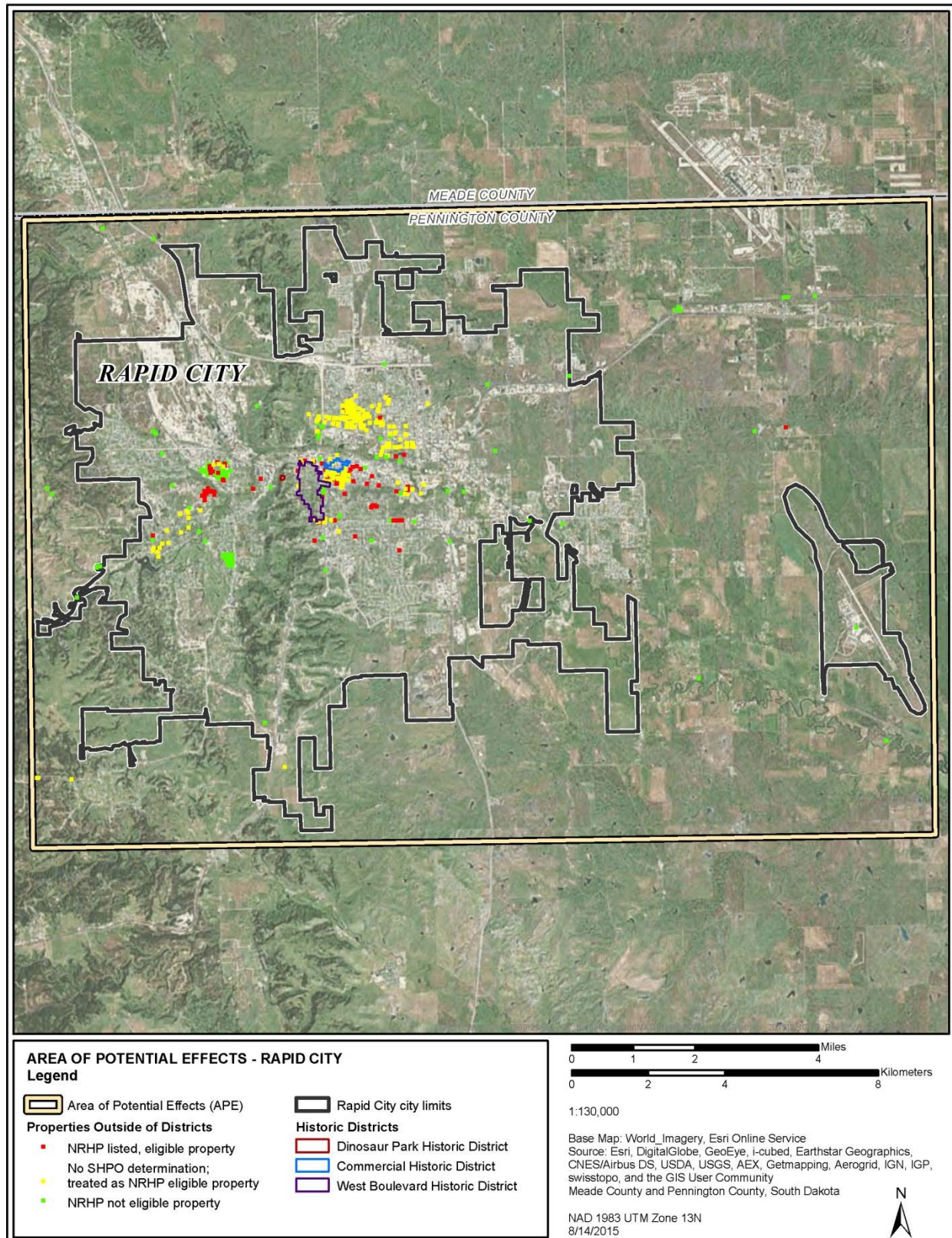


Figure 3.3-2. Area of Potential Effects – Rapid City.

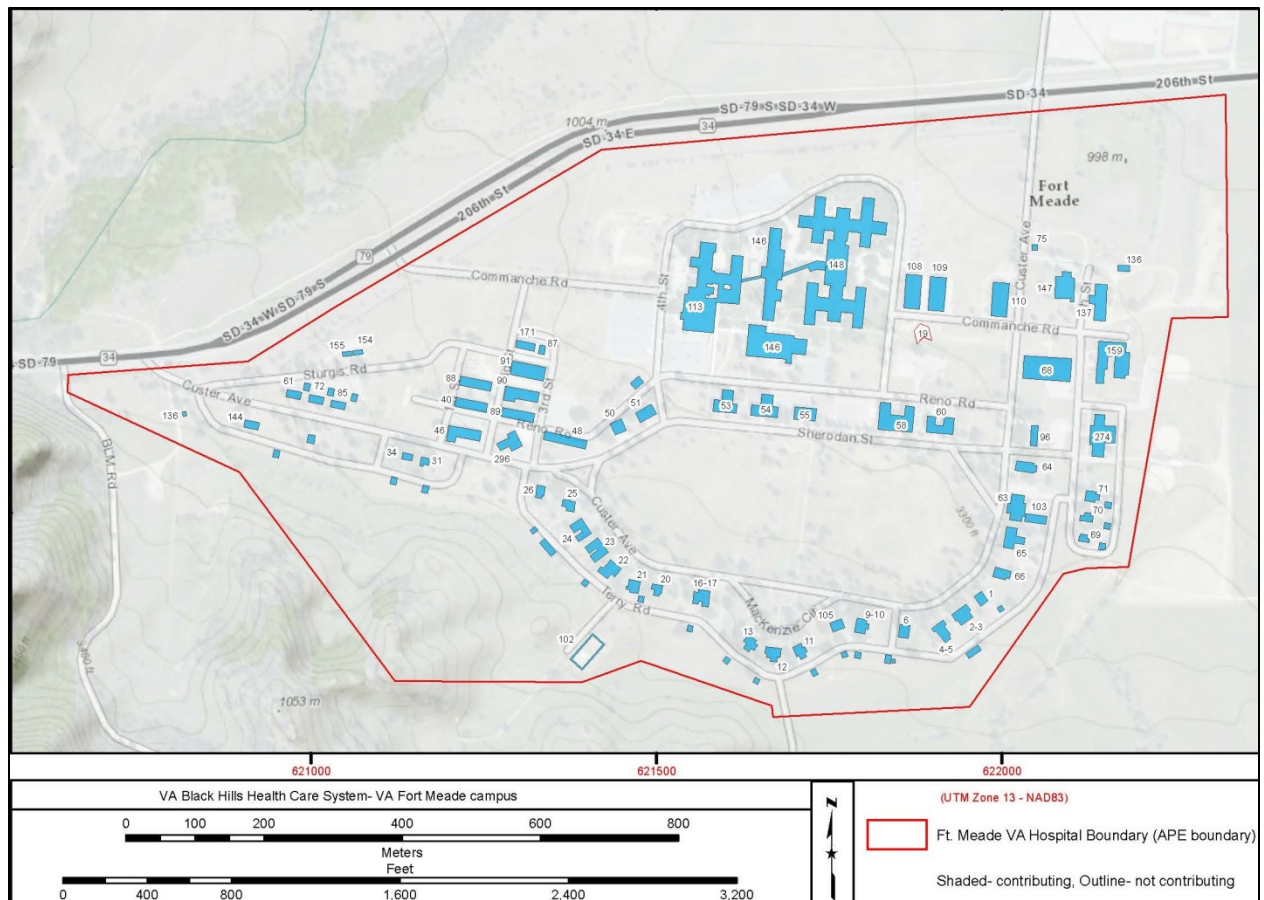


Figure 3.3-3. Area of Potential Effects – Fort Meade VA Campus.



### **3.3.4 Consultation and Outreach**

In May 2012, VA BHHCS initiated consultation under NHPA Sections 106 and 110(f) to consider ways of identifying and avoiding, minimizing, or mitigating potential adverse effects to historic properties, including the Battle Mountain Sanitarium NHL that could result from the reconfiguration proposal. This process did not proceed to a full environmental review, however, until publication of the Notice of Intent in the Federal Register on May 16, 2014, which allowed VA to re-engage the consultation process and initiate the integrated NEPA/NHPA process to prepare an EIS for the reconfiguration proposal, VA re-engaged the consultation process. SHPO, the Advisory Council for Historic Preservation, the National Park Service, Tribal leaders, and other stakeholders were also formally notified of the integrated process by letter dated May 13, 2014.

The public involvement process, identification of consulting parties, and consultation on historic properties for the integrated NEPA/NHPA process are described in Chapter 6, Public Involvement, Consultation, and Agency Coordination.

### **3.3.5 Cultural Background, Identified Cultural Resources and Historic Properties**

Evidence of human occupation of the Black Hills region corresponds archaeologically to that of Northwest Plains cultures in general, spanning at least the previous 12,000 years (Kornfeld et al. 2010). Archaeological evidence of the human occupation of the current study area in prehistoric times commonly ranges from artifact scatters, lithic reduction sites (workshops), and lithic procurement areas (quarries) to hearths, stone circles, and rock features (cairns), as well as a variety of other archaeological site and feature types (USFS 1996, 2010). The VA Hot Springs Campus may contain such common archaeological sites as prehistoric artifact and lithic scatters and historic debris or dump scatters where the land surface is not built up or the grounds not too extensively modified.

The Black Hills region was within the Great Sioux Reservation as the U.S. expanded its western frontiers and territories in the nineteenth century. Conflicts and incursions with prospectors, settlers, and troops through about 1877 ended in the U.S. Army's removal of the Sioux and their allies from the Black Hills. In 1879, Colonel W. J. Thornby staked a primitive claim at a spring on the headwaters of Fall River (City of Hot Springs 2015). Meanwhile, successful mining at Deadwood, about 65 air miles north of present-day Hot Springs, firmly established the Dakota Territory gold fields. Mining traffic also established a wagon route from Deadwood south, passing near the Thornby spring and claim, into Nebraska and the closest railroad access at Sidney (Federal Writers' Project 2006). The town of Hot Springs was developed in the 1880s, with resorts forming around the springs. The federal Battle Mountain Sanitarium was constructed by 1907.

Historic properties identified in the APEs are discussed in the following sections. Identification of cultural resources and historic properties within the APEs began with examination of the South Dakota SHPO's Historic Sites Survey files, available through the Cultural Resource Geographic Research Information Display (CRGRID) interface. The CRGRID data were supplemented by examining local and regional studies, and soliciting input from consulting parties on potential cultural resources.

### 3.3.5.1 Cultural Resources in Hot Springs Area of Potential Effects

CRGRID identified more than 300 cultural resources previously recorded within the 8.5-square-mile Hot Springs APE (Archaeological Research Center 2016); additional cultural resources were identified by consulting parties and public stakeholders. These resources, summarized in Table 3.3-1, include known historic properties such as the Battle Mountain Sanitarium NHL and two historic districts: the Hot Springs Historic District and the Log Cabin Tourist Camp District on the north side of town. Figure 3.3-4 shows details of the historic districts within the Hot Springs APE.

**Table 3.3-1. Summary of Cultural Resources in Hot Springs Area of Potential Effects.**

<b>Cultural Resource Types Identified within the Hot Springs APE</b>	
Cemeteries	Archaeological sites
Public Parks	Areas of significance to Native Americans
Museums	Historic Districts
Paleontological sites	Individual Historic Properties
<b>Historic Properties Identified within the Hot Springs APE</b>	
Allen Bank Building & Cascade Springs Bath House- Sanitarium	Battle Mountain Sanitarium, National Home for Disabled Volunteer Soldiers National Historic Landmarks
Archaeological Site No. 39FA1010	Beaver Creek Bridge
Archaeological Site No. 39FA1013	Hot Springs High School
Archaeological Site No. 39FA1049	Hot Springs Historic District
Archaeological Site No. 39FA1093	Log Cabin Tourist Camp
Archaeological Site No. 39FA1152	Petty House
Archaeological Site No. 39FA1154	Phillip Wesch House
Archaeological Site No. 39FA1155	Pig Tail Bridge
Archaeological Site No. 39FA1204	State Soldiers Home Barn
Archaeological Site No. 39FA806	State Veterans Home (with cemetery)
Archaeological Site No. 39FA90	Bridge 24-290-029

Sources: South Dakota CRGRID (Archaeological Research Center) 2016 and the National Park Service database of properties listed in the National Register Historic Places (NRHP) 2016.



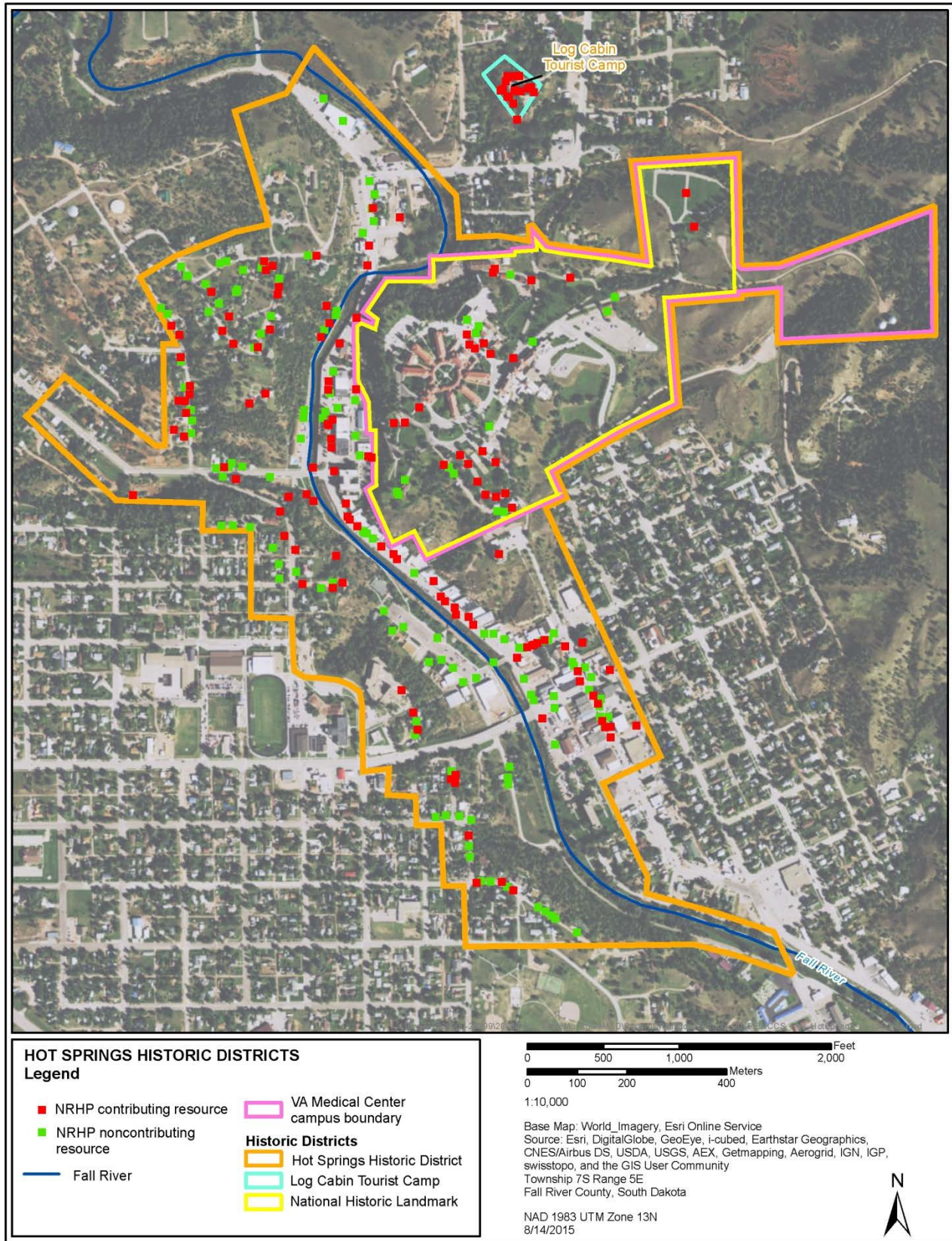


Figure 3.3-4. Historic Districts in Hot Springs Area of Potential Effects.

The Hot Springs APE includes the Battle Mountain Sanitarium NHL, which is discussed in Section 3.3.5.1.2, and a known sacred area to Native American tribes, which is discussed in Section 3.3.5.3. Stone features, such as the stone circle in the Hot Springs APE and cairns at archaeological sites are cultural resources of traditional importance to Native American tribes in the Black Hills region.

A sweat lodge constructed on the VA Hot Springs Campus honors the ongoing, local Native American traditions. Although it is a location for cultural activities, the structure itself is not a cultural resource. The sweat lodge was built in 1993 by the Substance Abuse Residential Treatment program, but is used by non-program patients as well (L. Epperson, email to M. Peters et al., February 10, 2015). Various parts of the VA Hot Springs Campus have received Native American blessings in recent times. The campus also contains two religious chapels in the traditions of other cultures.

The VA Hot Springs Campus and its designed landscape are part of the constructed environment built during the development of the City of Hot Springs after 1880. However, the area surrounding the campus and some undeveloped parts of the campus retain elements of setting persisting from pre-development eras (see Section 3.3.5.3, Regional Cultural Resources), especially where natural areas remain.

### **3.3.5.1.1 Hot Springs Historic District**

In 1881 a group of Deadwood entrepreneurs, including freight wagon operator Fred Evans, formed the Hot Springs Town-Site Company to attract the region's new wealth and visitors to a warm-springs resort on the Fall River in the southern Black Hills (Putz 1974). With two national rail system connections in the Black Hills, continued growth of the Hot Springs region included agricultural settlement, mining services, tourism, and health care (Hufstetler and Bedeau 2007).

Town founder and contractor Evans constructed the railroads' Union Depot building in 1891, and Fall River County erected a new courthouse on River Street near its Fall River crossing. Additional sturdy downtown commercial and institutional buildings followed, most built of similar local sandstone (Putz 1974). Evans built the five-story sandstone Evans Hotel in 1892, added a hotel wing in 1893, and built his own house on Summit Avenue. The 1893 sandstone City Hall on River Street, the Public School, and 1895 IOOF (International Order of Odd Fellows) Hall on Chicago Avenue are also from this initial downtown development period. Residential subdivisions extended the city along its Fall River Valley streets with single-family homes typical of the period, built of local stone and wood (Putz 1974).

By the 1970s, preservationists recognized Hot Springs, with the surviving buildings noted above as well as the Battle Mountain Sanitarium of 1907, as significant and representing a Black Hills health spa of the early twentieth century. The SHPO and U.S. Department of the Interior listed downtown and several adjacent neighborhoods (generally the city limits circa 1920) on the NRHP as the Hot Springs Historic District (Putz 1974); see Figure 3.3-5.





Figure 3.3-5. Downtown Hot Springs along River Street.

### 3.3.5.1.2 Battle Mountain Sanitarium National Historic Landmark

Congress passed legislation in 1902, signed by President Theodore Roosevelt, adding a 10<sup>th</sup> federal facility to the post-Civil War National Home for Disabled Volunteer Soldiers (NHDVS): the Battle Mountain Sanitarium. The NHDVS in Hot Springs became the first fully equipped hospital among the system's traditional assisted living dormitories and accompanying cemeteries (Julin 2010).

The initial buildings for Battle Mountain Sanitarium were designed by Omaha architect Thomas Rogers Kimball. The associated landscape was designed by Kansas City urban planner George Edward Kessler. Construction was completed in 1907 for the majority of buildings still serving the VA Hot Springs Campus. A new Main Hospital was added in 1926 and other improvements were made in the 1930s, following World War II, and through the late twentieth century (Julin 2010).

The Secretary of the Interior designated the Battle Mountain Sanitarium a NHL in July 2011. The buildings and campus are “an outstanding representation of the development of the [NHDVS], the first national system to provide benefits to volunteer soldiers...the only NHDVS branch to be established as an independent medical facility, rather than a residential institution” (Julin 2010). The NHL has 40 contributing buildings, sites, structures, and objects, interspersed with 17 noncontributing buildings and structures.



The 12 buildings of the main campus that reflect Kimball's original design are a focal point of the NHL (Figures 3.3-6 to 3.3-8). These include the administration building (Building 1) and connected hospital complex of Buildings 2 through 11, most of which are rectangular wards arrayed in a spoke arrangement around a center court, and connected by a circular arcade. The campus retained sufficient historic integrity to be recognized as a National Historic Landmark in 2011; a study on the character-defining elements of these buildings conducted in 2012 on behalf of VA concluded that the buildings retain a high degree of historic integrity (Julin 2010, NRHP 2016, Treanor Architects 2012). VA has constructed some minor additions and added exterior fire escapes but the exterior of most buildings remain as originally designed. The interiors of buildings have been remodeled to serve a more contemporary use; however, much of the historic material remains intact. The later additions of wings onto the north and southeast of the 1926 hospital (Building 12) are two of the few major noncontributing components of the NHL (Julin 2010). Additional information about the campus is included in Section 3.1.2.1.2., Buildings and Architecture.



**Figure 3.3-6. Battle Mountain Sanitarium, Administration Building (Building 1).**



**Figure 3.3-7. Overview of Battle Mountain Sanitarium/VA Hot Springs Campus.**



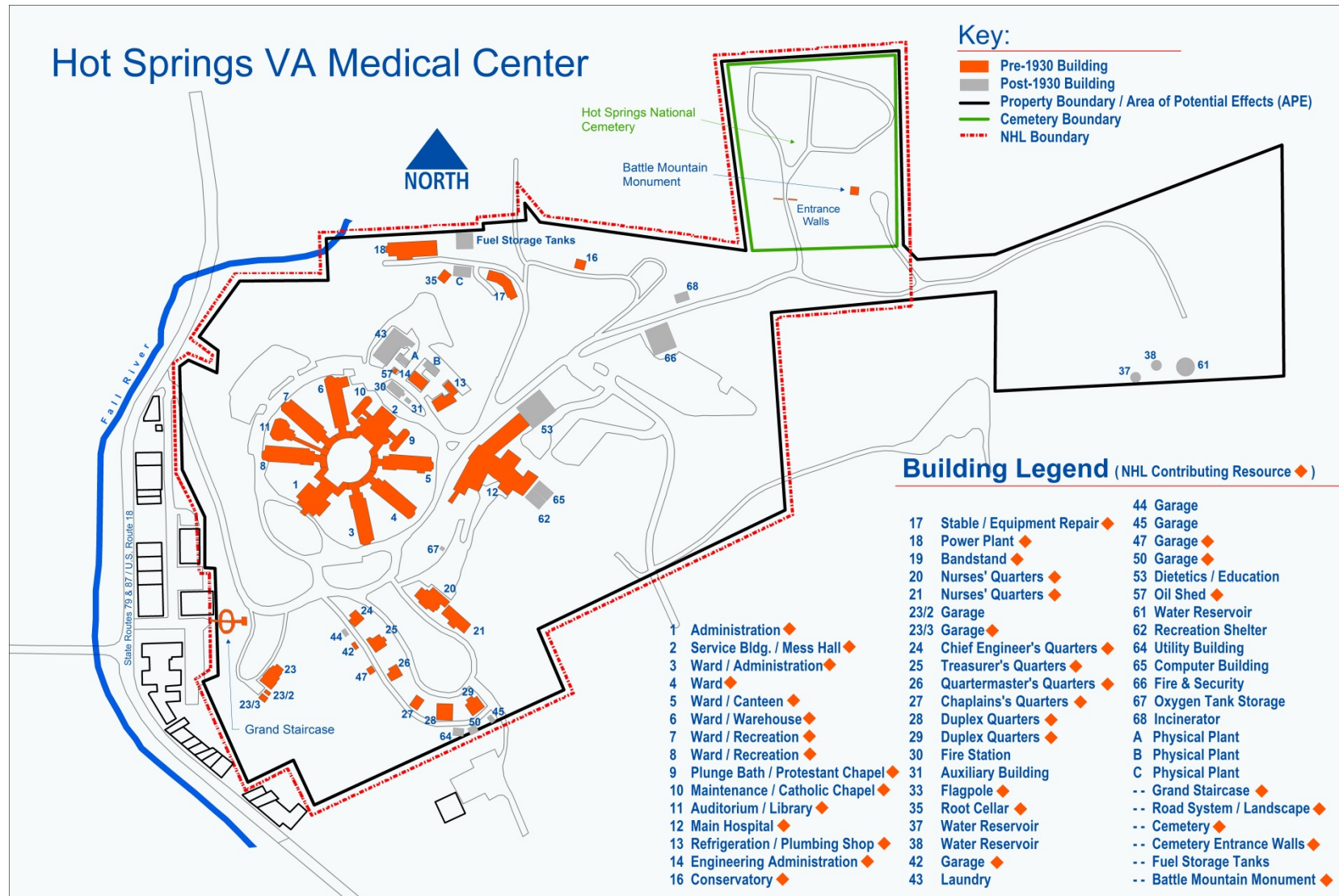


Figure 3.3-8. Battle Mountain Sanitarium National Historic Landmark.

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Building Number	Function	Contributing Status	Date of Construction
1	Administration	Contributes to Battle Mountain Sanitarium NHL	1907
2	Service Building/Mess Hall	Contributes to Battle Mountain Sanitarium NHL	1907
3	Ward/Administration	Contributes to Battle Mountain Sanitarium NHL	1907
4	Ward	Contributes to Battle Mountain Sanitarium NHL	1907
5	Ward/Canteen	Contributes to Battle Mountain Sanitarium NHL	1907
6	Ward/Warehouse	Contributes to Battle Mountain Sanitarium NHL	1907
7	Ward/Recreation	Contributes to Battle Mountain Sanitarium NHL	1907
8	Ward/Recreation	Contributes to Battle Mountain Sanitarium NHL	1907
9	Plunge Bath/Protestant Chapel	Contributes to Battle Mountain Sanitarium NHL	1907
10	Maintenance/Catholic Chapel	Contributes to Battle Mountain Sanitarium NHL	1907
11	Auditorium/Library	Contributes to Battle Mountain Sanitarium NHL	1914-1915
12	Main Hospital	Contributes to Battle Mountain Sanitarium	1926, 1937

Building Number	Function	Contributing Status	Date of Construction
		NHL	
13	Refrigeration/Plumbing Shop	Contributes to Battle Mountain Sanitarium NHL	1907
14	Engineering Administration	Contributes to Battle Mountain Sanitarium NHL	1907
16	Conservatory	Contributes to Battle Mountain Sanitarium NHL	1907
17	Stable/Equipment Repair	Contributes to Battle Mountain Sanitarium NHL	1907
18	Power Plant	Contributes to Battle Mountain Sanitarium NHL	1907
19	Bandstand	Contributes to Battle Mountain Sanitarium NHL	1909
20	Quarters	Contributes to Battle Mountain Sanitarium NHL	1910
21	Quarters	Contributes to Battle Mountain Sanitarium NHL	1926
23	Mansion	Contributes to Battle Mountain Sanitarium NHL	1907
23/2	Garage	Does not contribute	1980
23/3	Garage	Contributes to Battle Mountain Sanitarium NHL	1925
24	Quarters	Contributes to Battle Mountain Sanitarium	1907



Building Number	Function	Contributing Status	Date of Construction
		NHL	
25	Quarters	Contributes to Battle Mountain Sanitarium NHL	1907
26	Quarters	Contributes to Battle Mountain Sanitarium NHL	1907
27	Quarters	Contributes to Battle Mountain Sanitarium NHL	1913
28	Quarters	Contributes to Battle Mountain Sanitarium NHL	Ca. 1927
29	Quarters	Contributes to Battle Mountain Sanitarium NHL	Ca. 1920
30	Fire Station	Does not contribute	Ca. 1930
31	Auxiliary Building	Does not contribute	Ca. 1932
33	Flagpole	Contributes to Battle Mountain Sanitarium NHL	1907
35	Root Cellar	Contributes to Battle Mountain Sanitarium NHL	1914
37	Water Reservoir	Does not contribute	Modern
38	Water Reservoir	Does not contribute	Modern
42	Garage	Contributes to Battle Mountain Sanitarium NHL	1925
43	Laundry	Does not contribute	1943
44	Garage	Does not contribute	Ca. 1935

Building Number	Function	Contributing Status	Date of Construction
45	Garage	Does not contribute	Ca. 1935
47	Garage	Contributes to Battle Mountain Sanitarium NHL	Ca. 1926
50	Garage	Contributes to Battle Mountain Sanitarium NHL	Ca. 1930
53	Diabetics/Education	Does not contribute	1949
57	Oil Shed	Contributes to Battle Mountain Sanitarium NHL	Ca. 1928
61	Water Reservoir	Does not contribute	Modern
62	Recreation Shelter	Does not contribute	1954
64	Utility Building	Does not contribute	1977
65	Computer Building	Does not contribute	1985
66	Fire & Security	Does not contribute	1988
67	Oxygen Tank Storage	Does not contribute	1988
68	Incinerator	Does not contribute	Ca. 1985
--	Grand Staircase	Contributes to Battle Mountain Sanitarium NHL	1915
--	Road System/Landscape	Contributes to Battle Mountain Sanitarium NHL	1907
--	Spring House	Contributes to Battle Mountain Sanitarium NHL	Ca. 1903
--	National Cemetery	Contributes to Battle Mountain Sanitarium NHL; Individually eligible for listing in the National Register	Ca. 1907

Building Number	Function	Contributing Status	Date of Construction
		of Historic Places	
--	Cemetery Entrance Walls	Contributes to Battle Mountain Sanitarium NHL	Ca. 1920
--	Fuel Storage Tanks	Does not contribute	Ca. 1980
--	Battle Mountain Monument	Contributes to Battle Mountain Sanitarium NHL	1914
--	Physical Plant	Does not contribute	Ca. 1950, 2007

While historically connected to the Battle Mountain Sanitarium as its water supply, the VA-owned spring house on Fall River (Figure 3.3-9) is outside of the geographic NHL boundary and the Hot Springs Historic District. The water source appears as a spring house on Battle Mountain plans as early as 1903 (VA 1903), and is associated with institutional use of the local springs (Federal Writers' Project 2006). The original appearance of the structure over the spring is not known; however, updates include modern shingles, paint, and a security fence. VA has recommended expansion of the Battle Mountain Sanitarium NHL nomination to include the spring house.



**Figure 3.3-9. VA Spring House near Fall River.**

As the first national Veterans care center to serve as an independent medical facility, the Battle Mountain Sanitarium is a place of long-established health care for Veterans. During public scoping meetings and consultation with consulting parties, the Battle Mountain Sanitarium was identified as a traditional place of care for the Veteran community. Additionally, the presence of the Battle Mountain Sanitarium is part of what leads the City of Hot Springs to self-identify as “The Veterans Town”.

Two possible communities have been explored as cultures that could consider the Battle Mountain Sanitarium campus a Traditional Cultural Property (TCP): Veterans who receive or have received health care at the facility, and the Hot Springs community. According to National Park Service (NPS) guidance, “a ‘traditional’ community is a one that has beliefs, customs, and practices that have continued over time, been passed down through the generations, are shared, and help to define the traditions of the community” (NPS Bulletin 38, revised 1998). While there is a case to be made that the Veteran population nationwide may well be a traditional community, a subset of Veterans whose sole shared activity is receiving medical care at the same facility does not constitute a traditional community with shared beliefs, customs, and practices. Veterans do not come together at the Hot Springs Campus to practice common customs; they come to the Hot Springs Campus to receive medical care. Neither do veterans come to the Hot Springs campus to reinforce their feeling of community with other Veterans—such an argument could be made, for example, of a VFW hall, or even a smaller group like the Vietnam Veterans of America. The next generation of Veterans do not

learn traditional practices from one another at a VA hospital, but rather share a bond forged before entering a medical facility.

Similarly, an institution that is a vital economic and employment engine to a town, even one that reinforces respect for Veterans, does not create a traditional community. Residents of the Hot Springs area do not gather together at specified intervals to venerate Veterans, nor do they share other practices that may characterize the site as a TCP. Members of the Town of Hot Springs do not form a singular community with “shared beliefs, customs, and practices” that are rooted in and reinforced by living in proximity to the Hot Springs Campus.

The VA Hot Springs Campus is a historic property and a unique place, but it is not a TCP as defined by NPS Bulletin 38 (revised 1998). Though the Hot Springs Campus is a place for a group of Veterans to meet and receive medical services, these activities do not constitute traditional cultural practices.

### ***3.3.5.2 Cultural Resources in the Rapid City Area of Potential Effects***

CRGRID identified more than 1,300 cultural resources located within the 150-square-mile Rapid City APE (Archaeological Research Center 2016). These resources are summarized in Table 3.3-2. Two historic districts in the APE contain most of the historic buildings. These include the Commercial Historic District and the West Boulevard Historic District. The Commercial Historic District was listed in the NRHP in 1974, expanded in 1998 and has 57 contributing resources from the late nineteenth through mid-twentieth centuries (Archaeological Research Center 1957). The West Boulevard Historic District, located to the southwest of the Commercial Historic District, was also listed in the NRHP in 1974 and expanded in 1995; it has 535 contributing resources over 34 full and 14 partial subdivision blocks of primarily single-family detached residences built between 1900 and 1940 (Archaeological Research Center 2015; Kooiman et al. 1995). Figure 3.3-10 illustrates historic building and district distributions within the Rapid City APE. Beyond the districts, another 35 historic properties within the Rapid City APE are listed in the NRHP.

**Table 3.3-2. Summary of Cultural Resources in Rapid City Area of Potential Effects.**

<b>Cultural Resource Types Identified within the Rapid City APE</b>	
Cemeteries	Archaeological sites and artifact scatter
Public Parks	Areas of significance to Native Americans
Museums	Historic Districts
Rock art	Individual Historic Properties
Earthworks	Railways
Quarry	Dam
<b>Historic Properties Identified within the Rapid City APE</b>	
Black Hills Model Home	Casper Supply Company of South Dakota
Cassidy House	Chapel in the Hills
Church of the Immaculate Conception	Civilian Conservation Corp Camp F-10 Historic District
Dean Motor Company	Dinosaur Park
Emmanuel Episcopal Church	Fairmont Creamery Company Building
Feigel House	First Congregational Church
Gambrill Storage Building	Johnson Siding, House & Sawmill
Madison Ranch Historic District	Maurice Nelson House
Michael Quinn House	Milwaukee Road Freight House
Minuteman Missile National Historic Site	Motor Service Company
Nichols Funeral Home Building	Pap Madison Cabin
Pennington County Courthouse	Rapid City Carnegie Library
Rapid City Commercial Historic District	Rapid City Fruit Company
Rapid City Garage	Rapid City High School
Rapid City Historic Commercial District	Rapid City Historical Museum



Historic Properties Identified within the Rapid City APE	
Rapid City Laundry	Rapid City West Boulevard Historic District
Swander Bakery Building	Zack Holmes House
Glenn W. Shaw House	8 NRHP eligible archaeological sites
Bridge 52-419-297	7 Future NRHP eligible building resources
247 NRHP eligible built resources	

Source: Archaeological Research Center 2016 and NRHP 2016.

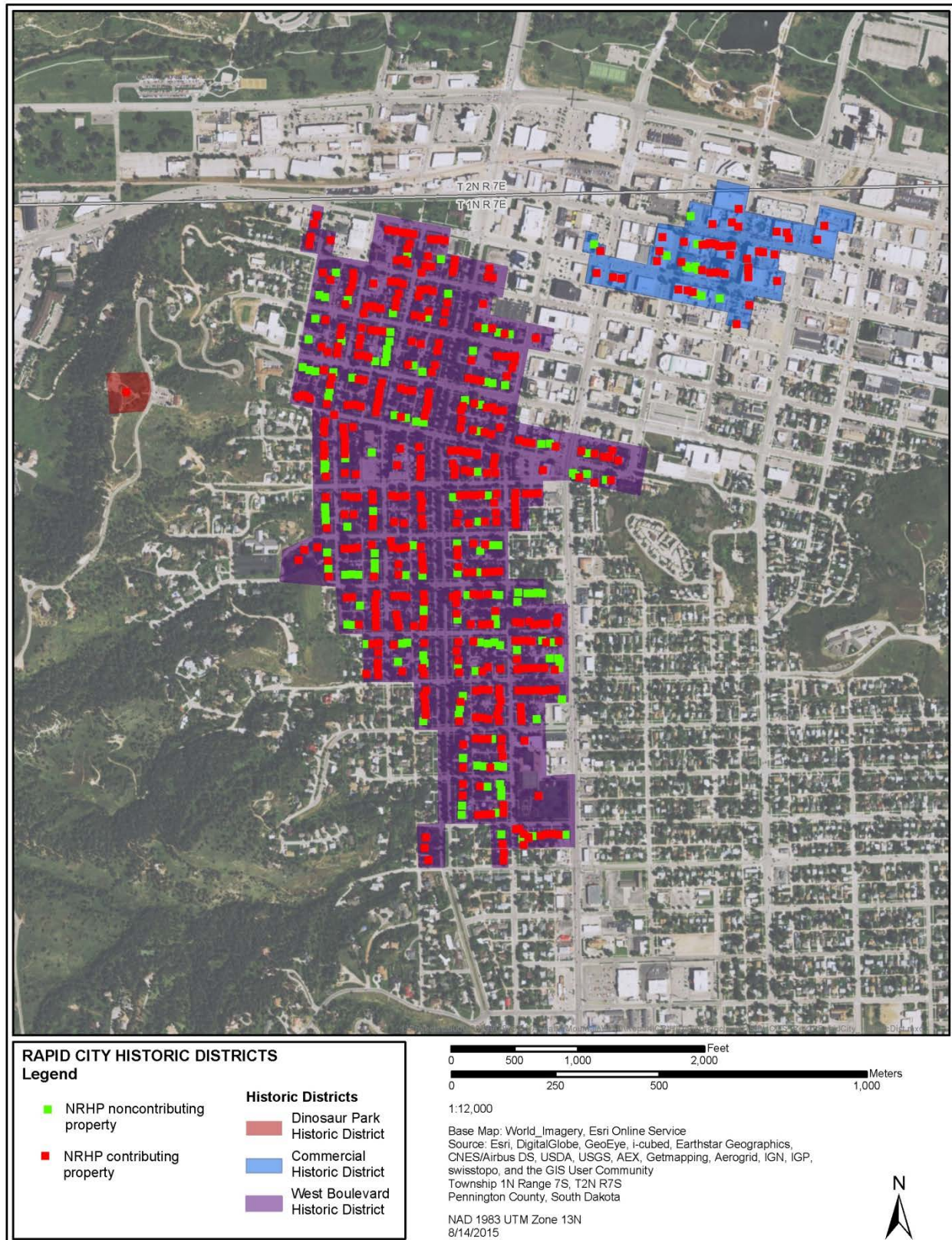


Figure 3.3-10. Historic Districts in Rapid City Area of Potential Effects.

### **3.3.5.3 Cultural Resources in the Fort Meade Area of Potential Effects**

The Fort Meade APE contains cultural resources including historic buildings, archaeological sites, and areas of significance to Native Americans. The VA Fort Meade Campus lies within a portion of the Fort Meade Historic District.

VA has undertaken a new evaluation of those campus buildings and features constructed as part of the Third Generation of U.S. Veterans Hospital construction campaign, a post-1945 initiative to expand VA services to better serve Veterans of World War II. VA has determined that 70 of the 83 campus resources contribute to this National Register Historic District.

As noted previously, no physical changes to the VA Fort Meade campus are planned as part of the proposed reconfiguration of services and facilities within the VA BHHCS. Consequently, no historic properties within the VA Fort Meade campus would be affected by the proposed reconfiguration. The Fort Meade campus is an active medical center currently undergoing renovations, and has the potential to require further modifications in the future in order to conform to modern healthcare needs; however, such ongoing or future undertakings are not related to the proposed reconfiguration evaluated in this EIS.

#### **3.3.5.3.1 Fort Meade Historic District**

The Fort Meade District, also known as the Fort Meade Reservation, was listed in the NRHP in 1973. The historic district includes components of past fort activities from 1878 to 1944. The Fort Meade District incorporates the original fort boundaries, including the Fort Meade VA Medical Center (Putz 1973).

#### **3.3.5.3.2 Fort Meade Veterans Hospital Historic District**

The Fort Meade Veterans hospital complex spreads across a campus of approximately 250 acres located three miles east of Sturgis, South Dakota. Founded as an Army post in 1878, the campus evolved as a military site until it transferred to VA in 1944; VA transformed the property into a medical facility. As a result, the facility has a mix of historic Army and VA buildings. The majority of the Army buildings that remain are former quarters arranged around a historic parade ground; these buildings are largely constructed of red brick with some Colonial Revival detailing. Several of these former quarters received a veneer of fieldstone during a Works Progress Administration modernization effort in the late 1930s. Other Army buildings extant at the Fort Meade campus include former stables, a theatre, and a riding hall. In the northern portion of the campus, the VA-constructed buildings include the main hospital building, boiler house, kitchen, and other hospital-related facilities that date from the post-World War II period. The Fort Meade campus has a total of 81 buildings; 68 of these buildings contribute to the historic district. One structure and one cemetery are also contributing elements to the Fort Meade Historic District, as is the historic parade ground (Hannah 2015).

### **3.3.5.4 Regional Cultural Resources**

The Black Hills region is important in the heritage and traditions of Native American peoples who live or customarily lived in the region. The entire Black Hills landmass (“He Sapa” to some Siouan peoples) is sacred within certain Native American traditions (Sundstrom 1996). Within the Black Hills region, some higher profile landmarks continue to be well-recognized as specific sacred sites,



including the Hot Springs area (Sundstrom 1996). Sundstrom (1996) distinguishes the “traditional or sacred landscapes” of the Black Hills to encompass three kinds of properties: (1) distinctive regions, such as the Black Hills or Bear Lodge Mountains; (2) specific points in the landscape, such as the hot springs or Bear Butte; and (3) kinds or types of places, such as springs and caves. The Hot Springs sacred site (“Minnekahta” to some Siouan peoples) constitutes a general—rather than discretely delimited—location, encompassing the entire area of the Fall River Valley and bounding mountains (the traditional use area) that contains the hot springs proximate to and south of present-day Evans Plunge in the Fall River floodplain within the City of Hot Springs. While Battle Mountain (Figures 3.3-1 and 3.3-11) is not distinctly identified in the ethnographic literature, this landform is recognized by a Siouan name (“He-oki-cize”) by at least one nineteenth century source (Hans 1907). One archaeological artifact scatter is recorded on the Battle Mountain prominence (Archaeological Research Center 2015). Historic accounts referring to Battle Mountain tend to tie it to occupation of the Hot Springs area (SD SHPO et al. 1990; Hot Springs Chamber 2010). Sundstrom (1996) notes that the main areas of the Black Hills cultural landscape, including Hot Springs specifically, have a potential for connected traditional properties that are “less prominent [and] not as likely to have been recorded ethnographically,” such as additional “high peaks, prominent buttes, springs, caves....” The VA Hot Springs Campus is within the Fall River Valley, on the western foot of the Battle Mountain landform, within the vicinity of prominent hot springs locations. Therefore, the VA Hot Springs Campus is in the Native American traditional area of the Hot Springs sacred site (Sundstrom 1996), interconnecting with the Battle Mountain landform. VA considers the Hot Springs sacred site area, with Battle Mountain interconnected, as a historic property of religious and cultural importance to Native American tribes with ancestral, aboriginal, or ceded land ties to the Black Hills Region.



**Figure 3.3-11. View of Battle Mountain Land Mass from the VA Hot Springs Campus.**

The Black Hills region and its features are traditionally important to a number of Northwest Plains tribes. In addition to the Sioux (Lakota, Dakota, and Nakota), these tribes include the Cheyenne, Arapaho, and Kiowa, as well as potentially the Ponca, Mandan, and other tribes with connections to the greater Northwest Plains culture area (Sundstrom 1996; Phillips et al. 2013). Sioux tribes retain historic claim to the Black Hills in U.S. treaty negotiations, first with the 1851 Treaty of Fort Laramie and then reiterated in the 1868 Treaty of Fort Laramie (Phillips et al. 2013). The list of tribes contacted for consultation is included in Appendix C.

Despite recent development and historic construction, there could be archaeological sites or materials that represent important connections to the traditional use of the Hot Springs/Battle Mountain area or the Black Hills. Archaeological sites or materials could exist on the VA Hot Springs Campus or at locations yet to be identified in Hot Springs and Rapid City where construction could occur under the reconfiguration alternatives. Existing cultural resource site records (see Sections 3.3.5.1 and 3.3.5.2) indicate potential sites or materials include rock art, stone circles, and cairns. Locations for any construction or modification would receive phased review (see Section 3.3.6).

### **3.3.6 Phased Identification and Evaluation of Historic Properties**

Certain alternatives, including the new preferred alternative A-2, could result in construction or renovation of additional VA facilities in Hot Springs and Rapid City, or cause ground-disturbing activities that could expose archaeological sites or features at the VA Hot Springs Campus or yet to be identified locations. VA would continue phased identification and evaluation of historic properties when any specific locations for future construction are determined.

Phased review of new development locations is subject to identification and evaluation of cultural resources and historic properties pursuant to federal NEPA and NHPA Section 106 regulations (40 CFR 1502.16(g) and 36 CFR 800.4). Any discovery of historic properties during new development actions would be addressed under the Section 106 process pursuant to 36 CFR 800.13 (Post-Review Discoveries) and under NEPA pursuant to 40 CFR 1502.9(c).



## 3.4 Geology and Soils

Geological resources consist of surface and subsurface materials. Within a given physiographic province, geologic resources are described in terms of topography and physiography, geology, soils, and, where applicable, geologic hazards.

Topography and physiography relate to the shape and arrangement of a land surface, including elevation and the position of natural and human-made features.

Geology is the study of the physical and dynamic history of the Earth and provides information on the structure and configuration of surface and subsurface features. Geologic data are based on field observations of the surface and borings to identify subsurface composition.

Soils are the unconsolidated materials overlying bedrock or other parent material. Soils are described by their type, slope, and physical characteristics. In some cases, soil properties must be examined for their compatibility with particular construction activities or types of land use.

### 3.4.1 Regulatory and Policy Framework

The *Clean Water Act*, described further in Section 3.5.1, includes provisions that regulate soil erosion and stormwater runoff to navigable waters. The applicability of the Act to the proposed project is described in greater detail in Section 3.5, Hydrology and Water Quality.

The *Earthquake Hazards Reduction Act* was enacted to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” The act established the National Earthquake Hazards Reduction Program, led by the Federal Emergency Management Agency.

Executive Order 12699, *Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction* (1990), requires federal agencies to ensure that buildings (including both new construction and leases) are designed and constructed in accordance with appropriate seismic design and construction standards.

Executive Order 12941, *Seismic Safety of Existing Federally Owned or Leased Buildings* (1994), adopted standards for assessing the seismic safety of owned and leased buildings and mitigating unacceptable seismic risks in those buildings.

The International Building Code provides minimum standards to protect the public safety, health, and welfare in regards to building construction. The Code was developed to consolidate existing building codes into one uniform code, and includes specifications related to soils and foundations.

VA Directive 7512, *Seismic Safety of VA Buildings*, establishes policy regarding the seismic safety of VA buildings and incorporates requirements established by Executive Orders 12699 and 12941.

## 3.4.2 Current Conditions

### 3.4.2.1 Regional Geology and Seismicity

The Hot Springs and Rapid City areas are located near the border of the Pierre Hills and Black Hills physiographic divisions of the Great Plains province (SDGS n.d.). The Pierre Hills division consists of a series of smooth hills and ridges with rounded tops. This region is underlain by the Pierre shale formations and has lower elevations than the plateau country to the north and south (Malo 1997). The Black Hills division is a mountainous area consisting of a series of upturned sedimentary strata (hogbacks), arranged concentrically around a core of igneous and metamorphic rocks (Malo 1997).

Peak ground accelerations—an indicator of seismic event effects—in southwestern South Dakota are relatively low (two percent probability over 50 years of exceeding approximately 0.06 to 0.14 times the standard acceleration of gravity) (USGS 2014a). The region has a history of earthquakes ranging in intensity, as measured on the Modified Mercalli Intensity Scale (see Table 3.4-1), from III to VI (USGS 2007), with the more intense earthquakes and the majority of faults located within the Black Hills division. Figure 3.4-1 depicts the regional locations of earthquakes and faults.

**Table 3.4-1. Modified Mercalli Intensity Scale.**

Intensity	Shaking	Description/Damage
<b>I</b>	Not felt	Not felt except by a very few under especially favorable conditions.
<b>II</b>	Weak	Felt only by a few persons at rest, especially on upper floors of buildings.
<b>III</b>	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
<b>IV</b>	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
<b>V</b>	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
<b>VI</b>	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
<b>VII</b>	Very Strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
<b>VIII</b>	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
<b>IX</b>	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
<b>X</b>	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

Source: USGS 2014b.

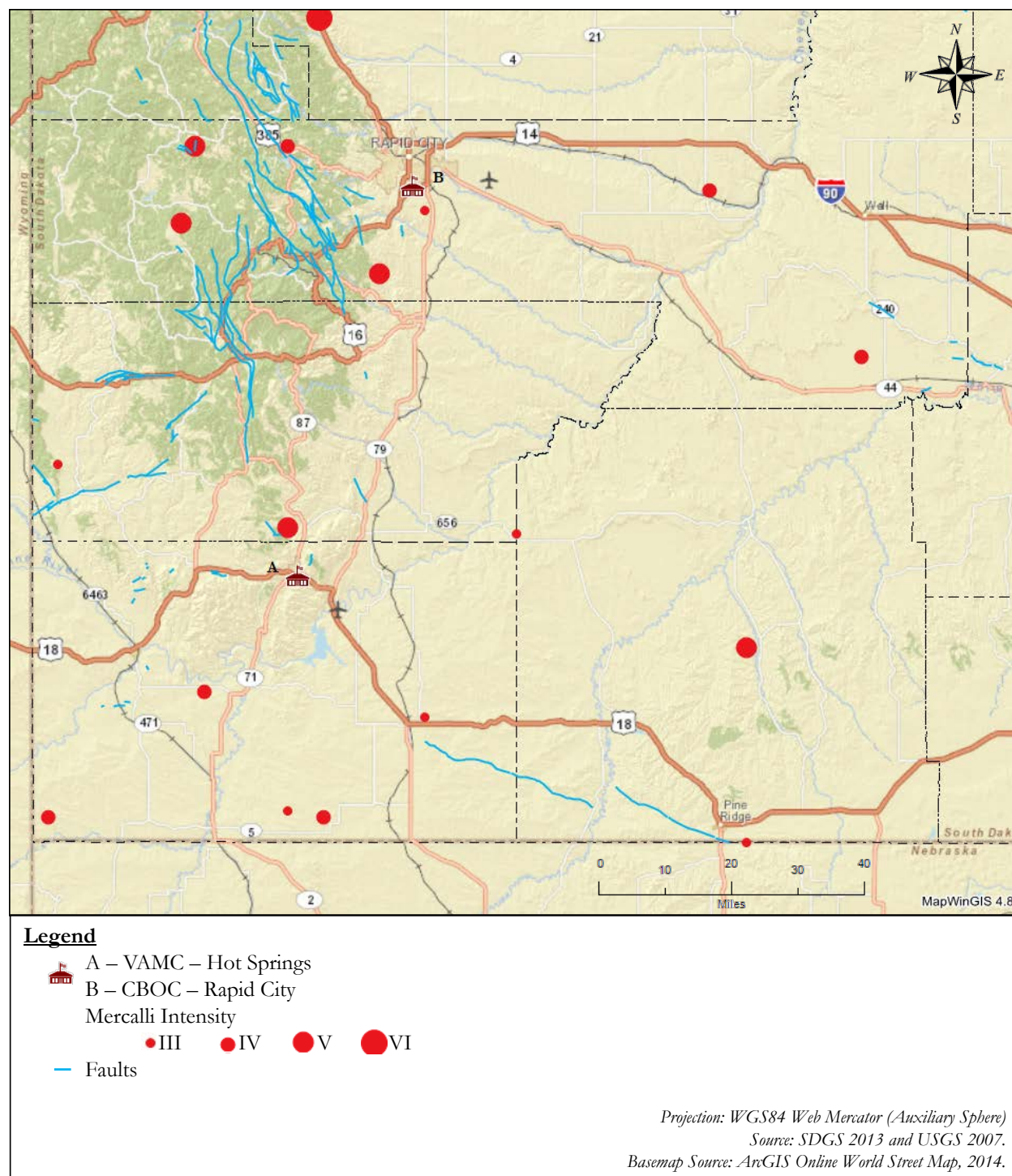


Figure 3.4-1. Earthquakes and Faults in the Hot Springs and Rapid City Areas.

### 3.4.2.2 Hot Springs Area Topography and Soils

Topography in the Hot Springs, SD, area ranges from gently sloping (central city area) to severely sloped (mountainous areas surround the city), and generally slopes toward Fall River in the center of the city (see Figure 3.4-2).

The following geologic units are present in the Hot Springs area (see Figure 3.4-3) (USGS 2007):

- Jms
  - Morrison Formation (Late Jurassic): Light-gray to green and variegated red, brown, yellow, or lavender, siliceous claystone, shale, and siltstone containing interbedded sandstone and fresh-water limestone lenses. Thickness up to 150 feet (46 meters).
  - Unkpapa Sandstone (Late Jurassic): White, massive to thin-bedded, fine-grained, argillaceous sandstone. May be variegated to banded red, yellow, brown, or lavender. Thickness up to 267 feet (81 meters).
  - Sundance Formation (Late to Middle Jurassic): Greenish-gray, yellow, tan, red to orange, and white, variegated, interbedded, fine- to coarse-grained sandstone, siltstone, clay, and limestone. Thickness 250 to 350 feet (76 to 107 meters).
  - Gypsum Springs Formation (Middle Jurassic): Massive white gypsum and minor maroon siltstone and shale. Thickness up to 40 feet (12 meters).
- Pmo
  - Minnekahta Limestone: Purple to gray, finely crystalline, thin- to medium-bedded limestone with varying amounts of red shale. Thickness 30 to 50 feet (9 to 15 meters).
  - Opeche Shale: Red siltstone, argillaceous sandstone and shale interbedded with caliche layers. Thickness 85 to 130 feet (26 to 40 meters).
- PPm – Minnelusa Formation: Variegated, yellow to red, gray to brown, pink to purple, and black, interbedded sandstone, siltstone, shale, limestone, dolomite, calcarenite, chert, and brecciated beds. Thickness 394 to 1,175 feet (120 to 358 meters).
- Qal – Alluvium: Clay to boulder-size clasts with locally abundant organic material. Thickness up to 75 feet (23 meters).
- Qt – Terrace Deposits: Clay to boulder-size clasts deposited as pediments, paleochannels, and terrace fills of former flood plains. Thickness up to 75 feet (23 meters).
- TrPs – Spearfish Formation: Red sandy shale, siltstone, sandstone, and minor limestone. Interbedded with abundant gypsum. Thickness 328 to 559 feet (100 to 170 meters).

Hot Springs area is primarily urban with little to no agricultural activity. No land within the city limits is designated as prime farmland. In 1980, about 12,000 acres in Fall River County, or about 1 percent of the total acreage, met the requirements for prime farmland. All of this acreage was used for irrigated crops, mainly corn and alfalfa (USDA 1982).







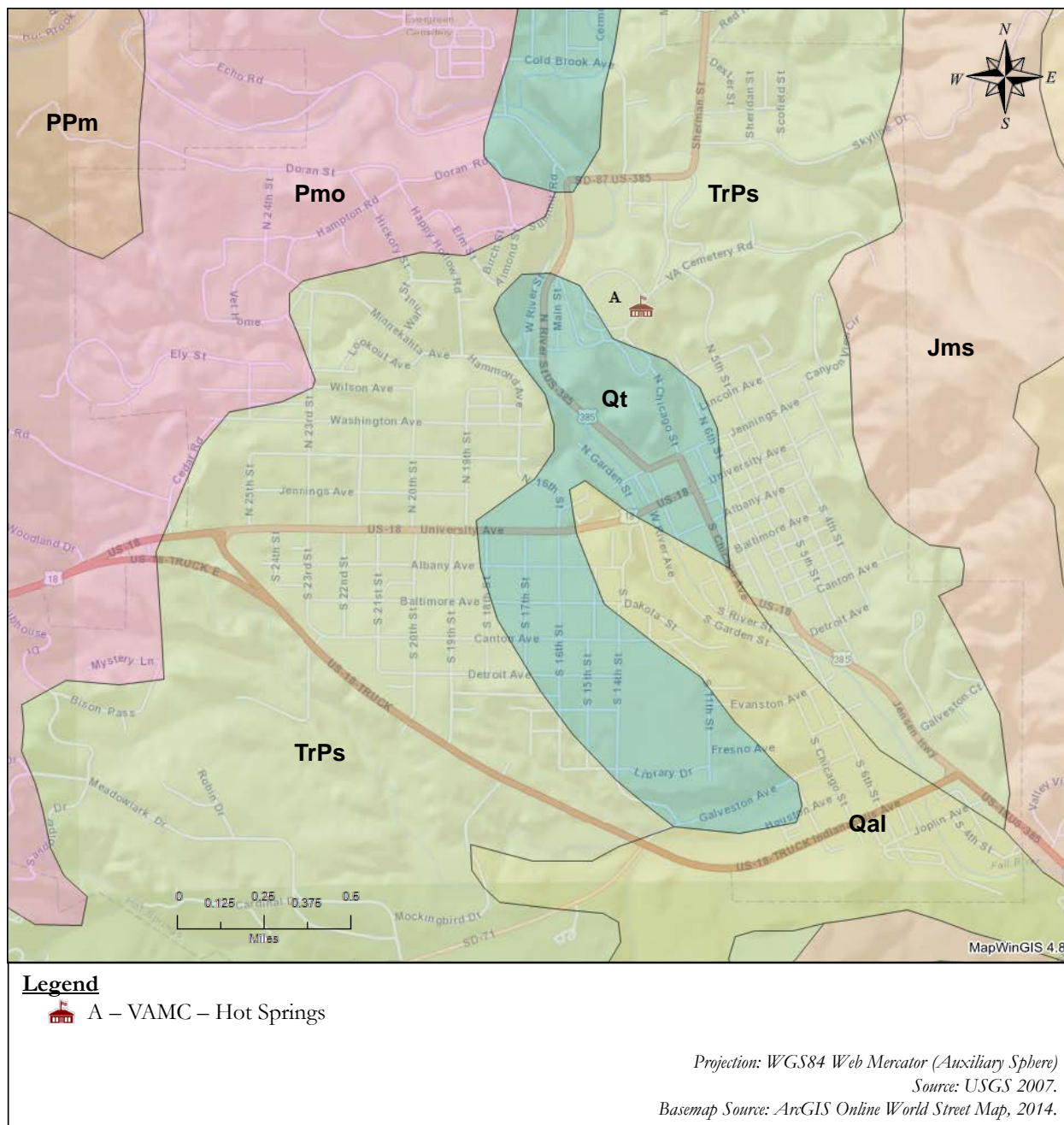


Figure 3.4-3. Geologic Units, Hot Springs, SD.

### 3.4.2.3 Rapid City Area Topography and Soils

Topography in the Rapid City, SD, area ranges from gently sloping (central and eastern city area) to moderately sloped (ridge separating the western and eastern city areas), and generally slopes toward Rapid Creek in the center of the city (see Figures 3.4-4 and 3.4-5).



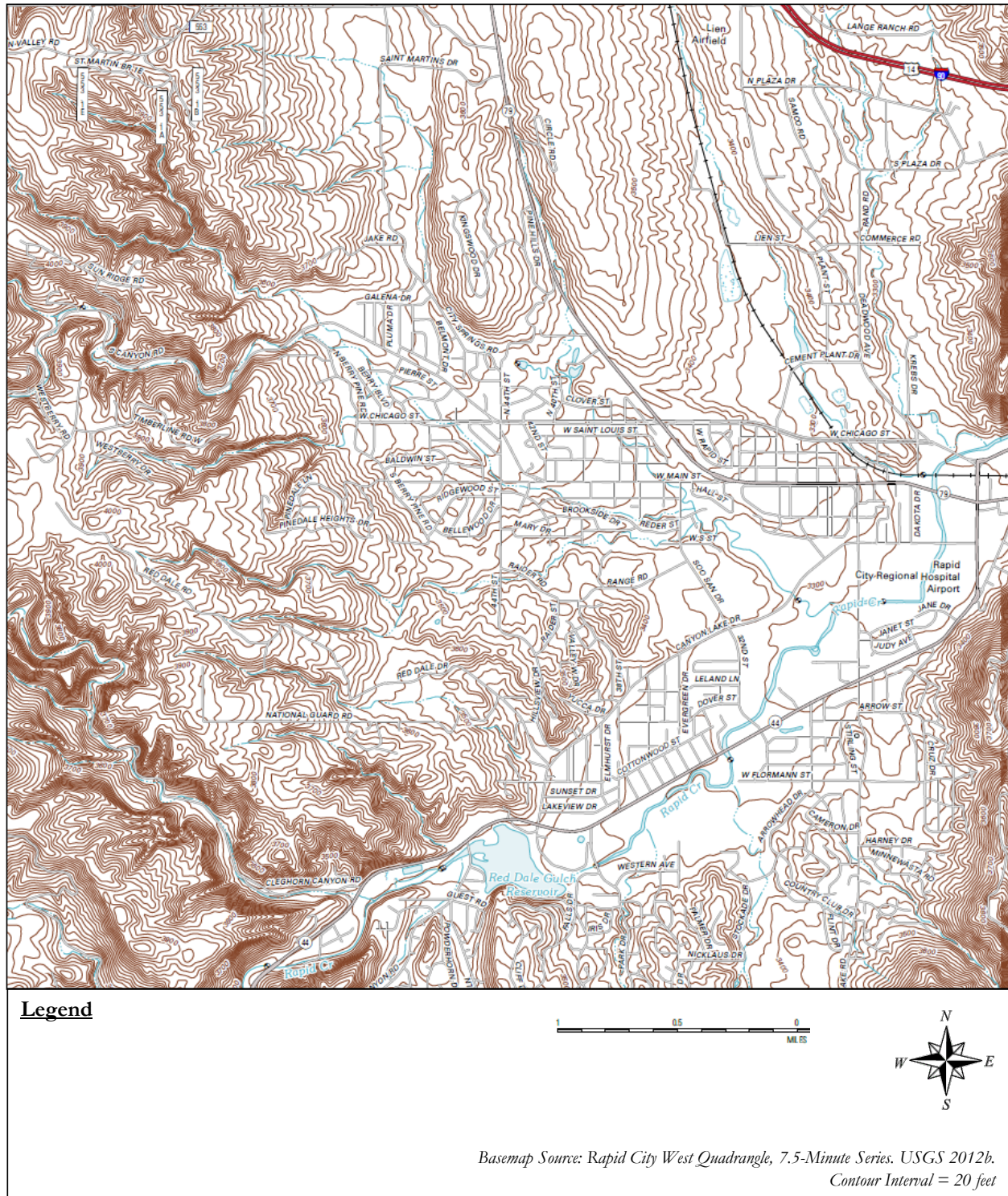


Figure 3.4-4. Topography: Rapid City, SD (west).



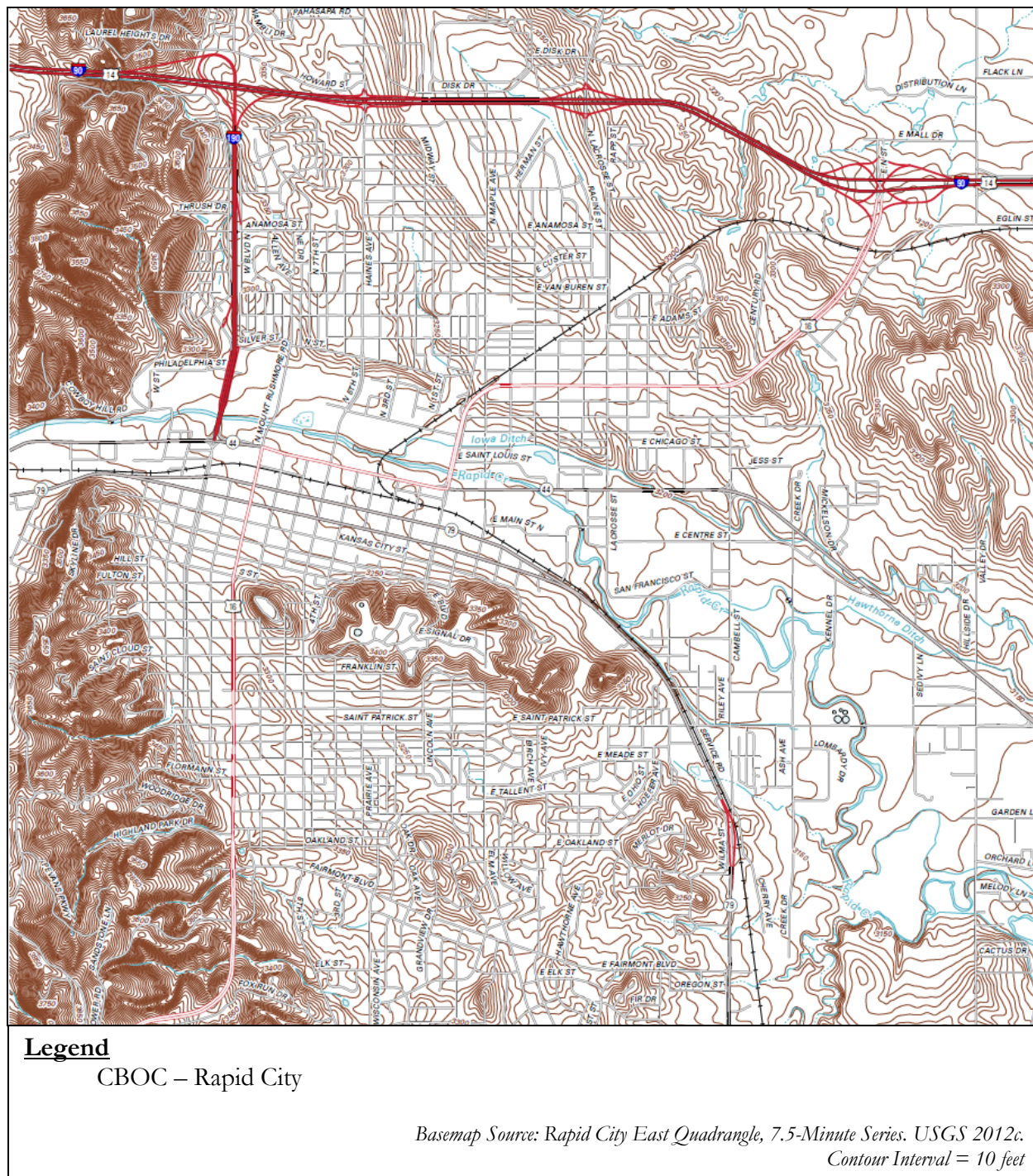
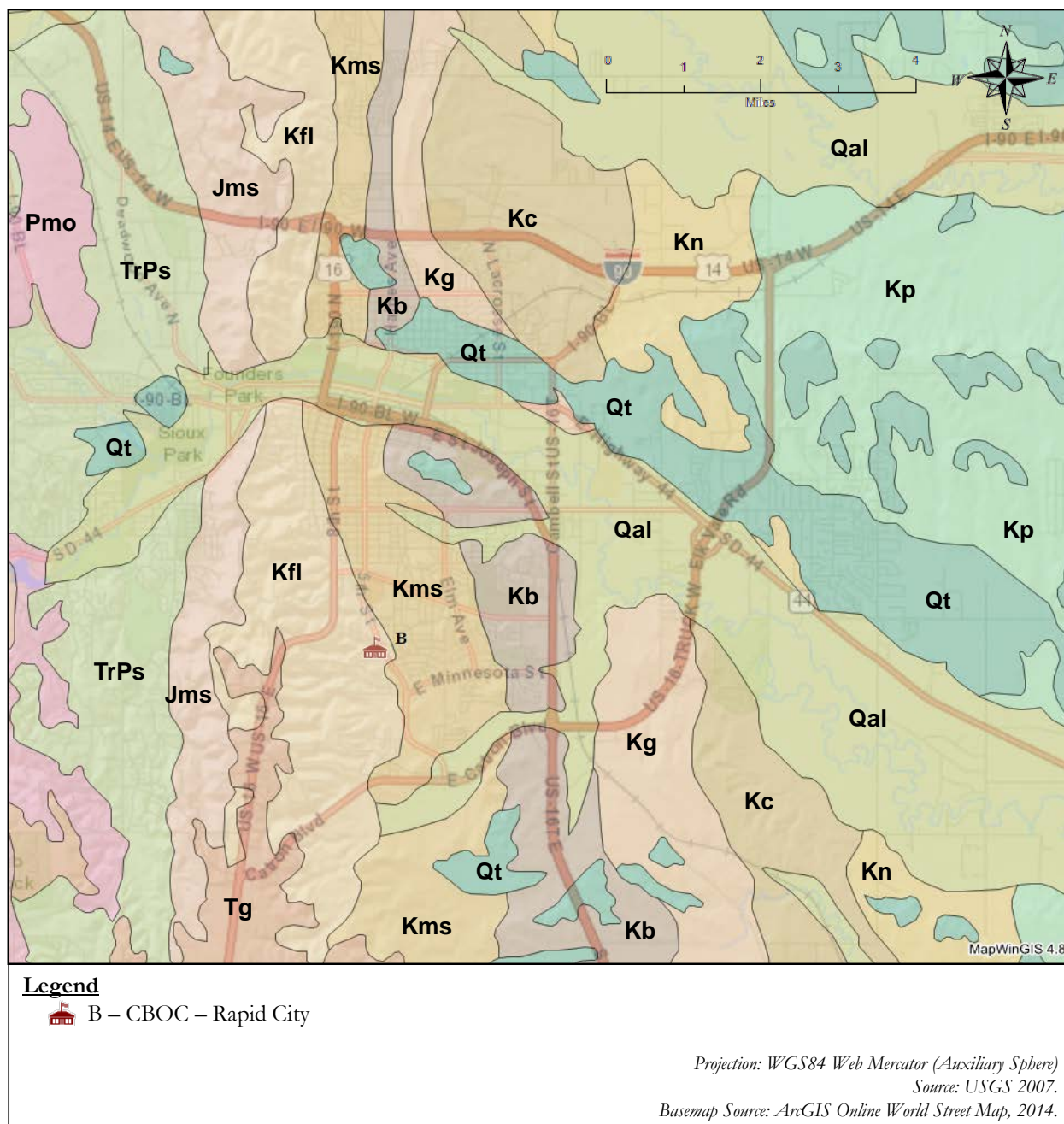


Figure 3.4-5. Topography: Rapid City, SD (east).

The following geologic units are present in the Rapid City area (see Figure 3.4-6) (USGS 2007):

- Jms
  - Morrison Formation (Late Jurassic): Light gray to green and variegated red, brown, yellow, or lavender, siliceous claystone, shale, and siltstone containing interbedded sandstone and fresh-water limestone lenses. Thickness up to 150 feet (46 meters).
  - Unkpapa Sandstone (Late Jurassic): White, massive to thin-bedded, fine-grained, argillaceous sandstone. May be variegated to banded red, yellow, brown, or lavender. Thickness up to 267 feet (81 meters).
  - Sundance Formation (Late to Middle Jurassic): Greenish-gray, yellow, tan, red to orange, and white, variegated, interbedded, fine- to coarse-grained sandstone, siltstone, clay, and limestone. Thickness 250 to 350 feet (76 to 107 meters).
  - Gypsum Springs Formation (Middle Jurassic): Massive white gypsum and minor maroon siltstone and shale. Thickness up to 40 feet (12 meters).
- Kb – Belle Fourche Shale: Dark gray to black bentonitic shale containing minor limestone lenses, bentonite layers, fossiliferous calcarenite, and large, ferruginous, carbonate concretions. Thickness 150 to 350 feet (46 to 107 meters).
- Kc – Carlile Shale: Dark gray to black, silty to sandy shale with several zones of septarian, fossiliferous, carbonate concretions. Contains up to three sandstone beds near the middle of the formation and sandy calcareous marl at the base. Thickness 345 to 620 feet (105 to 189 meters).
- Kfl (Inyan Kara Group)
  - Fall River Formation: Variegated brown, red, gray to purple, calcareous, well-sorted, fine-grained sandstone, siltstone, and shale containing mica flakes. Thickness 100 to 200 feet (30 to 61 meters).
  - Lakota Formation: Yellow, brown, red-brown, gray to black silty shale, pebble conglomerate, and massive to thin-bedded, cross-bedded sandstone. Locally interbedded with fresh-water limestone and bituminous coal beds. Thickness 35 to 500 feet (11 to 152 meters).
- Kg – Greenhorn Formation: Gray shale, mudstone, marl, calcarenite, and shaley limestone grading upward into light gray to tan, alternating marl and thin-bedded, fossiliferous limestone. Thickness 225 to 315 feet (69 to 96 meters).
- Kms
  - Mowry Shale: Black to gray, siliceous, fissile shale and siltstone containing bentonite layers, and sparse sandstone dikes and sills. Thickness 125 to 250 feet (38 to 76 meters).
  - Newcastle Sandstone: Gray, light-brown to yellow, discontinuously distributed siltstone, claystone, sandy shale, and fine-grained sandstone. Thickness up to 290 feet (88 meters).
  - Skull Creek Shale: Dark gray to blueish-gray shale containing ferruginous, and carbonate concretions. Thickness 150 to 275 feet (46 to 84 meters).





**Figure 3.4-6. Geologic Units: Rapid City, SD.**

- Kn – Niobrara Formation: White to dark gray argillaceous chalk, marl, and shale. Weathers yellow to orange. Contains thin, laterally continuous bentonite beds, chalky carbonaceous shale, minor sand, and small concretions. Thickness 160 to 225 feet (49 to 69 meters).
- Kp – Pierre Shale: Blue-gray to dark gray, fissile to blocky shale with persistent beds of bentonite, black organic shale, or light-brown chalky shale. Contains minor sandstone, conglomerate, and abundant carbonate and ferruginous concretions. Thickness 1,000 to 2,700 feet (305 to 823 meters).

- Pmo
  - Minnekahta Limestone: Purple to gray, finely crystalline, thin- to medium-bedded limestone with varying amounts of red shale. Thickness 30 to 50 feet (9 to 15 meters).
  - Opeche Shale: Red siltstone, argillaceous sandstone and shale interbedded with caliche layers. Thickness 85 to 130 feet (26 to 40 meters).
- Qal – Alluvium: Clay to boulder-size clasts with locally abundant organic material. Thickness up to 75 feet (23 meters).
- Qt – Terrace Deposits: Clay to boulder-size clasts deposited as pediments, paleochannels, and terrace fills of former flood plains. Thickness up to 75 feet (23 meters).
- Tg – Gravel Deposits: Clay to boulder-size clasts primarily from igneous and metamorphic rocks of the central Black Hills. Also includes Phanerozoic lithic clasts and rare vertebrate fossils. Thickness up to 60 feet (18 meters).
- TrPs – Spearfish Formation: Red sandy shale, siltstone, sandstone, and minor limestone. Interbedded with abundant gypsum. Thickness 328 to 559 feet (100 to 170 meters).

Rapid City is primarily urban with little to no agricultural activity. No land within the city limits is designated as prime farmland.

## 3.5 Hydrology and Water Quality

The hydrologic setting of a project includes both surface water and groundwater, and the quantity and quality of each. Local climates are also useful in describing and understanding the local hydrologic setting. While related to hydrology, floodplains and wetlands are discussed separately in Section 3.9.

Surface water resources typically consist of rivers, streams, lakes, and wetlands. Groundwater consists of subsurface hydrologic resources, and is an essential resource that functions to recharge surface water and is often used for potable water consumption, agricultural irrigation, and industrial applications. Surface water and groundwater resources are important contributors to the economic, ecological, recreational, and human health of a region.

### 3.5.1 Regulatory Framework

#### 3.5.2.1 *Clean Water Act*

The *Clean Water Act of 1977* gave the U.S. EPA the authority to set effluent standards on an industry-by-industry basis, and continued the requirements to set water quality standards for contaminants in surface waters by requiring each state to adopt water quality standards for receiving water bodies (Section 303). The Act requires the discharge of any pollutant from point sources into navigable waters to be authorized by a permit obtained under the NPDES (Section 402). The NPDES establishes limits on specific pollutants in order to restore and maintain the chemical, physical, and biological integrity of the surface water resource. The NPDES also regulates discharge of non-point sources of water pollution, such as stormwater.

Section 303 of the *Clean Water Act* requires states to adopt water quality standards for all surface waters based on the designated beneficial use. The SDDENR received EPA approval of their 2014 Integrated Report, identifying impaired water bodies within South Dakota that require water quality standards.

Section 404 of the *Clean Water Act* regulates the discharge of dredge or fill material into waters of the U.S., which includes wetlands (see Section 3.9).

#### 3.5.2.2 *Energy Independence and Security Act*

In 2007, the *Energy Independence and Security Act* was passed, which in part (Section 438) established new stormwater design requirements for federal development and redevelopment projects to reduce the impacts of stormwater runoff. Specifically, construction projects that disturb more than 5,000 square feet must maintain or restore the predevelopment hydrology to the maximum extent technically feasible with respect to temperature, rate, volume, and duration of flow.

### 3.5.2 Current Conditions

South Dakota has 14 major river basins, most of which drain into the Missouri River. The Hot Springs and Rapid City areas lie within the Upper Cheyenne River Basin (SDDENR 2014). Hot Springs is located in the Fall River subwatershed, within the Fall River watershed (hydrologic unit 101201090105) (USGS 2009).



The VA Hot Springs Campus contains both impervious surfaces (which allow little infiltration of precipitation into the soil and generate higher levels of runoff) and landscaped areas. Surface runoff of stormwater is generally in a westerly direction toward Fall River, which runs through Hot Springs. The annual mean flow in Fall River through Hot Springs is 24.2 cubic feet per second (USGS 2014a). Fall River is designated as an impaired water due to stream temperature exceedances for the coldwater permanent fish life beneficial use (SDDENR 2014). The watershed contains highly erodible soils. VA holds a surface water discharge system general permit (permit number SDG860037) authorizing the discharge of water from water treatment and/or distribution system activities to Fall River and includes monitoring and sampling requirements (SDDENR 2010).

The majority of Rapid City is located in the Cyclone Ditch-Rapid Creek subwatershed, within the Middle Rapid Creek watershed (hydrologic unit 101201100204) (USGS 2009). Primarily impervious surfaces surround the Rapid City CBOC. Surface runoff of stormwater is generally in an easterly direction towards Rapid Creek, which runs through Rapid City. The annual mean flow in Rapid Creek through Rapid City is 69.5 cubic feet per second (USGS 2014b). Rapid Creek is designated as an impaired water due to *Escherichia coli* and fecal coliform exceedances for the immersion recreation beneficial use (SDDENR 2014). The watershed contains highly erodible soils.

The availability of groundwater resources in the project area is influenced by many factors including location, local recharge and groundwater flow conditions, and structural features. The major confined aquifers in the project area are (from shallowest to deepest) the Inyan Kara, Minnekahta, Minnelusa, Madison, and Deadwood aquifers (USGS 2003). Groundwater quality is generally good with limitations related to aesthetic qualities associated with hardness and high concentrations of chloride, sulfate, sodium, manganese, and iron; very few health-related limitations exist (USGS 2003). Each of the aquifers is described below, based on information in USGS (2003).

- Shallow unconfined aquifer: Both the Hot Springs and Rapid City areas are underlain by a shallow unconfined aquifer. These alluvial deposits are generally adjacent to streams in the floodplain and readily yield water to wells.
- Inyan Kara Aquifer: The uppermost confined aquifer is the Inyan Kara aquifer, which lies below the Rapid City area, but is absent below the Hot Springs area. The depth to the top of this group below the Rapid City area ranges from less than 200 feet (outcrop in central Rapid City) to 2,000 feet.
- Minnekahta Aquifer: The Minnekahta aquifer lies below both the Hot Springs and Rapid City areas. The depth to the top of this group below the Rapid City area ranges from less than 200 feet (outcrop on the western side of Rapid City) to 3,500 feet. The depth to the top of this group below the Hot Springs area is 200 to 400 feet.
- Minnelusa Aquifer: The Minnelusa aquifer lies below both the Hot Springs and Rapid City areas. The depth to the top of this group below the Rapid City area ranges from less than 200 feet to 3,500 feet. The depth to the top of this group below the Hot Springs area is 200 to 400 feet.
- Madison Aquifer: The Madison aquifer lies below both the Hot Springs and Rapid City areas. The depth to the top of this group below the Rapid City area ranges from 600 feet to 4,000 feet. The depth to the top of this group below the Hot Springs area is 1,000 to 1,500

feet. The Madison aquifer returns the highest average well yields and temperatures are generally the warmest of the major aquifers.

- **Deadwood Aquifer:** The Deadwood aquifer lies below both the Hot Springs and Rapid City areas. The depth to the top of this group below the Rapid City area ranges from 1,000 feet to 4,500 feet. The depth to the top of this group below the Hot Springs area is 1,000 to 1,500 feet.

Hot Springs is known for the warm mineral springs found in the region. Initially settled in 1879 as Minnekahta (a Lakota Sioux word meaning Hot Water), the settlement was renamed Hot Springs in 1882. In 1890, Evans Plunge (an indoor pool fed by the natural springs) was constructed; the facility remains a local attraction today.

## 3.6 Wildlife and Habitat

This section describes the biological resources within the proposed project area. Biological resources include wildlife and plants and the habitats in which they exist. Habitat may be described in terms of ecological regions, or *ecoregions*, which are geographical areas with similar climate and landforms, containing a variety of ecosystems characterized by their plant and animal communities and abiotic conditions, such as climate, soils, and elevation. Ecoregions are described at varying scales, using a Roman numeral classification scheme. Level I is the largest scale, dividing North America into 15 ecoregions. Levels II and III further divide the continent into 50 and 85 subregions, respectively, while further subdivisions (Level IV) includes hundreds of subregions. This discussion focuses on the subregions identified at the Level III and Level IV scale.

### 3.6.1 Regulatory and Policy Framework

The *Endangered Species Act* of 1973, as amended, is federal legislation that is intended to conserve the ecosystems upon which endangered and threatened species depend and provide programs for the conservation of those species, thus preventing extinction of plants and animals. The law is administered by the Department of the Interior's Fish and Wildlife Service (FWS) and, for marine resources, the Commerce Department's National Oceanic and Atmospheric Administration. Section 4 of the *Endangered Species Act* addresses the listing and recovery of species and designation of critical habitat, which is a designated geographic area that contains feature essential for the conservation of a threatened or endangered species. Section 7 requires all federal agencies to ensure that any action they authorize, fund, or implement is not likely to jeopardize the continued existence of a federally protected species or result in destruction or adverse modification of its designated critical habitat. Section 9 prohibits the unauthorized "take" of federally protected species, which includes harassment, harm, pursuit, hunting, shooting, wounding, killing, trapping, capture, or collection of a protected species, or the attempt to engage in any such conduct. Federally protected species fall under one of two classifications:

- Endangered species are in danger of extinction throughout all or a significant portion of their range.
- Threatened species are likely to become endangered within the foreseeable future.

A species that is being considered by the FWS for protection as either endangered or threatened is described as "proposed" if a proposed regulation for its listing has been published in the Federal Register, or "candidate" if a proposed regulation has not been published.

The *Migratory Bird Treaty Act* of 1918 and Executive Order 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, require federal agencies to minimize or avoid impacts on migratory birds that are listed in 50 CFR 10.13. If a federal action cannot avoid measurable negative impact on migratory birds, the responsible agency must develop and implement, within two years, a Memorandum of Understanding with the FWS to promote the conservation of migratory bird populations. Migratory birds are those that live, reproduce, or migrate within or across international borders during their annual life cycle. The Act prohibits the taking (hunting, wounding, killing, possessing, or transporting) of any migratory bird, their eggs, features, or nests.

The *Bald and Golden Eagle Protection Act* and the *Migratory Bird Treaty Act* provide continued federal protection for the bald eagle, which was removed from the federal list of endangered and threatened

wildlife in 2007, although it may still be protected where it is listed under state laws. National guidelines for bald eagle management have been developed (FWS 2007).

Golden eagles received protection under the *Eagle Act* in 1962 due to the threat of their extinction, their similarity of appearance to bald eagles, and their value to agriculture as predators of rodents. Both species of eagles have special significance to Native American culture.

The *Federal Noxious Weed Act* mandates control of noxious weeds by limiting possible weed seed transport from infested areas to non-infested sites. Executive Order 13112, *Invasive Species*, requires federal agencies to prevent the introduction of invasive species; provide for their control; minimize their economic, ecological, and human health impacts; and, to the extent practicable, not authorize, fund, or carry out management actions that are likely to cause the introduction or spread of invasive species.

## 3.6.2 Current Conditions

### 3.6.2.1 Regional Overview

Hot Springs in Fall River County and Rapid City in Pennington County and their immediate surroundings comprise the potentially affected environment for biological resources. These surroundings include the Black Hills area and Black Hills National Forest, which directly flank Rapid City on its western border and closely envelop the town of Hot Springs to the north and west. Black Hills National Forest encompasses over 1.2 million acres that consist primarily of early to late succession ponderosa pine communities with inclusions of white spruce, quaking aspen, paper birch, bur oak, mountain mahogany, and high mountain meadows. Riparian habitats consist mainly of sedges, forbs, and willows. The lower elevations include grassland prairie. The forest includes 11 reservoirs, 1,300 miles of streams, and 13,000 acres of wilderness (National Forest Foundation 2015).

Approximately half of Fall River County is occupied by the Buffalo Gap National Grassland to the south and the Black Hills National Forest to the north. Higher elevation areas to the north into the Black Hills National Forest create favorable growing conditions for ponderosa pine. The lower elevation areas surrounding the Black Hills to the south are primarily used as rangeland for livestock grazing and as agricultural land. Just south of Hot Springs is a wild horse sanctuary on 11,000 acres of grassland prairies, ponderosa pine forests, and canyons along the Cheyenne River. Ten miles south of town is the Angostura Reservoir and Recreation Area that includes 36 miles of shoreline and sandy beaches. It is one of the few reservoirs in southwestern South Dakota and is an important location for migratory birds (SDFGP 2015a).

More than half of Pennington County is occupied by the Black Hills National Forest; as a result, the majority of the land cover in this county consists of ponderosa pine forest associated with short to tall grasslands and agricultural fields (NRC 2009). Within Rapid City, the land bordering Rapid Creek is prone to periodic flooding; thus, the city has conserved much of the land along its banks as open greenways that include habitat conservation and environmentally sensitive areas. City preservation areas include the floodplains along Rapid Creek and Box Elder Creek, riparian and upland wooded areas, and wildlife corridors. Agricultural uses are located primarily to the north, east, and south of Rapid City, outside of the urban services boundary, although some active agricultural lands currently existing within the urban services boundary today. Buffer reserves are found around major public facilities, such as the airport and water reclamation plant. Publicly and privately owned forest

conservation areas are located in the forested areas primarily to the west of Rapid City limits as well as central locations along Skyline Drive and north of M Hill.

### **3.6.2.2      *Vegetation***

#### **3.6.2.2.1      *Black Hills***

The Black Hills are dominated by ponderosa pine with open parklands and valleys covered by grasses. Pine forest intergrades with ponderosa pine woodland at lower elevations, in the lower Minnekahta Foothills, Red Valley, and Hogback Rim. This analysis focuses on the lower elevations of the Black Hills, which is the portion that abuts Rapid City and Hot Springs. In these areas, pine woodland includes somewhat closed to open, savanna-like stands of ponderosa pine. Bur oak, often mixed with ponderosa pine, can form large stands, especially in the northern and eastern parts of the Black Hills. Riparian hardwood vegetation at the lower elevations may include stands of bur oak with ironwood. Other riparian woodland types include cottonwood stands on low elevation floodplains, and a mix of hardwoods species such as oak, ash, boxelder, elm, and hawthorn in lower elevation draws and drainages.

Riparian shrublands at lower elevations typically consist of a mix of shrubs such as western snowberry, gooseberry, currant, and rose. Silver sagebrush occasionally forms large stands on floodplains. Thickets of western snowberry are common in draws and on floodplains.

Non-riparian shrubland types are best developed at lower elevations. Stands of big sagebrush are found in the outer part of the Hogback Rim. Mixed-grass prairie grasslands are most extensive at lower elevations, in the Minnekahta Foothills, Red Valley, and Hogback Rim. Dominant species include representatives of short, mixed and tallgrass prairies (Hall et al. 2002)

The Ponderosa Pine Woodland ecological system is best developed at lower elevations in the Black Hills, below 5,500 feet in the southern part and 4,500 feet in the northern part. Stands are occasional at higher elevations. This matrix system typically occurs in large-scale mosaics with grassland and shrubland types, and with bur oak in the northern and eastern Black Hills. These communities include ponderosa pine/bluebunch wheatgrass woodland, ponderosa pine/chokecherry forest, ponderosa pine/little bluestem woodland, ponderosa pine/Rocky Mountain juniper woodland, ponderosa pine/sedge woodland, and ponderosa pine/western wheatgrass woodland. Not all communities may be present, and some appear to be limited in distribution. Component communities can occur at higher elevations but are less common and not as extensive.

The Prairie ecological system also occurs at the same lower elevations in the Black Hills. Smaller stands of component communities occur at elevations as high as 6,000 feet in the southern Black Hills. This large patch system typically occurs in large-scale mosaics with ponderosa pine woodland communities and with low-elevation shrubland types. The Prairie ecological system includes stands of grassland communities, including western wheatgrass–green needlegrass mixed grass prairie, needle-and-thread–blue grama mixed grass prairie, northern Great Plains little bluestem prairie, northern plains big bluestem prairie, western wheatgrass–blue Grama–threadleaf sedge prairie, and wheatgrass–needle-and-thread mixed grass prairie. Not all communities may be present.

The Low Elevation Floodplain ecological system occurs along larger streams and rivers below 5,000 feet in the Black Hills. Most habitat is in private ownership; as a result, this system is under-surveyed and not well-characterized. It consists of various combinations of low elevation hardwood and

shrubland types, including ash–elm/wolfberry forest, box elder/chokecherry forest, cottonwood–peach-leaf willow floodplain woodland, cottonwood/wolfberry floodplain woodland, sandbar willow shrubland, silver sagebrush/western wheatgrass shrub prairie, and western snowberry shrubland. Grassland stands may also be present (Hall et al. 2002; USGS 2013).

### **3.6.2.2.2 Hot Springs**

Hot Springs is located within the Level IV Foothills ecoregion of the Level III Black Hills Ecoregion. The Black Hills Foothills ecoregion consists of two contrasting landscapes, the Hogback Ridge and the Red Valley. The Hogback Ridge forms a ring of foothills surrounding the Black Hills. The Red Valley (of Racetrack) encircles most of the Black Hills dome and acts as a buffer between the Hogback Ridge and the Black Hills. Natural vegetation within this region includes ponderosa pine, woodlands and open savannas with an understory of western wheatgrass, needle-and-thread grass, little bluestem, blue grama, buffalo grass, and leadplant. In addition, Rocky Mountain juniper occurs in the south. Battle Mountain, which rises from the northeast edge of Hot Springs, is located in the Dakota Hogback region of the Black Hills. Most of the mountain is covered with ponderosa pine forest although some aspen can be found (USGS 2013; SummitPost 2014).

The Hot Springs Campus grounds include mature vegetation. The bluff opposite of the site is thickly wooded. The campus slopes northeast at the rear of the hospital complex; the slope is covered with trees and shrubs.

### **3.6.2.2.3 Rapid City**

Rapid City is generally consistent with an urban setting but the Rapid City area lies in the plains, just east of the hogback in the Black Hills, and is flanked to the west by the Black Hills Foothills ecoregion. Rapid City is located within the Northwestern Great Plains Ecoregion (Level III) and the Semi-arid Pierre Shale Plains. The Semi-arid Pierre Shale Plains are relatively treeless, consisting of rolling hills and grasslands. Native grasslands persist in areas of steep or unbroken topography, but they have been largely replaced by spring wheat and alfalfa over most of the ecoregion. Agriculture is limited by erratic precipitation patterns and limited opportunities for irrigation. The mixed grass prairie outside of Rapid City has a predominance of shortgrass species such as little bluestem and buffalograss (Omernik et al. 2008).

### **3.6.2.3 Wildlife**

Wildlife populations in the Black Hills are diverse, consisting of species found in both western and eastern states. Elk, mule deer, pronghorn, and white-tailed deer are commonly seen. Black bears have been spotted in the Black Hills. Mountain lions are increasing dramatically as a result of prolific herds of deer and elk. Coyote, bighorn sheep, and mountain goats are also frequently seen. Bald eagle, hawk, osprey, peregrine falcon, and another 200 species of birds can be found in the forest, especially along streams and near water sources.

Low elevation riparian ecosystems in the Black Hills National Forest are not well-documented (USFS 2005). Approximately one-half of all low elevation riparian systems on the forest are privately owned (USFS 2005). As with other riparian ecosystems found in the Black Hills, these low elevation riparian ecosystems are highly productive and have relatively high levels of biodiversity. Numerous emphasis species are associated with low-elevation riparian ecosystems.



Wildlife populations are more limited in the developed cities of Rapid City and Hot Springs; small mammal vertebrates (bats, mice, and rabbits) are common, although white-tailed deer may also be seen, including on the VA Hot Springs Campus. Abundant bird species are found near Rapid Creek in Rapid City and Fall River in Hot Springs. The most common wildlife species near the town of Hot Springs are deer and pronghorn antelope, with other species present including elk, mountain lion, bighorn sheep, coyote, porcupine, fox, and rabbits. Like the entire Black Hills region, there is an abundance of bird species near Hot Springs.

Wildlife in the region of Rapid City includes many species of birds, reptiles, amphibians, and mammals that are characteristic of the Great Plains. Common wildlife species that occur around Rapid City are those typical of semi-developed grassland areas. Common mammals include mule deer, white-tailed deer, coyote, red fox, white-tailed jackrabbit, striped skunk, raccoon, black-tailed prairie dog, and big brown bat (SDGFP 2015b).

### **3.6.2.4 Fisheries**

#### **3.6.2.4.1 Black Hills**

Streams in the southern Black Hills are generally intermittent or ephemeral; many disappear underground. Others empty into the Cheyenne River, one of the two main rivers that encircle the Black Hills National Forest. The Cheyenne River flows from Wyoming into the southern part of the forest, towards the southeast and then turns northeastward along the southern foothills. About 60 miles further downstream, the Cheyenne empties into Lake Oahe on the Missouri River.

Historically, fish species diversity was limited in the Black Hills. Native species include creek chub, fathead minnow, finescale dace, lake chub, longnosed dace, longnosed sucker, mountain sucker, and white sucker. Many non-native fish species have been introduced, including salmonids. Trout were first introduced from Colorado in the 1880s. Following introduction, fish were further distributed by fishing enthusiasts, and many streams became populated with trout from reproduction and movement within watersheds. The effects of these non-natives on the native fisheries are unclear, although it is known that trout compete for food and space and prey on small fishes. All native fish species still occur in the Black Hills at varying population levels.

#### **3.6.2.4.2 Hot Springs**

Hot Springs is located within the Fall River watershed. The major waterbodies that support fisheries in Hot Springs and surrounding environs include the Fall River, Hot Brook Creek, Cold Brook Creek, and the Angostura Reservoir located 10 miles to the south. Multiple species of warmwater fish are found in Hot Brook Creek and the Fall River including longnose dace, sand shiner, bluegill, green sunfish, white sucker, creek chub, plains topminnow, and domestic non-native goldfish and jack dempsey. Other species found in the Fall River include channel catfish, smallmouth bass, shorthead redhorse, rock bass, and common carp. The South Dakota Department of Game, Fish, and Parks and SDDENR independently conducted waterbody assessments dating back to 1998; neither agency documented coldwater species in either Hot Brook Creek or the Fall River, where water temperatures are warm, often exceeding 80° F. During the winter months, the water temperature remains high enough that the creek and river do not freeze. In 2010, both Hot Brook Creek and the Fall River were assessed by the SDDENR, who determined the beneficial use designation of “coldwater marginal fish life propagation waters” should be removed and replaced as follows:

- Fall River: From the confluence of Hot Brook and Cold Brook Creek all the way to the Cheyenne River, the beneficial use designation was changed to (4) Warmwater permanent fish life propagation waters; (8) Limited contact recreation waters; (9) Fish and wildlife propagation, recreation, and stock watering waters; and (10) Irrigation waters.
- Hot Brook Creek: From Section 19, Township 7 South, Range 5 East to the confluence of Cold Brook Creek, the beneficial use designation was changed to (1) Domestic water supply; (4) Warmwater permanent fish life propagation waters; (8) Limited contact recreation waters; (9) Fish and wildlife propagation, recreation, and stock watering waters; and (10) Irrigation waters.

Cold Brook Dam was constructed on Cold Brook Creek to reduce flood damages in the Fall River Basin. Cold Brook Reservoir, located less than one mile north of Hot Springs, is managed for flood control and recreation. It is approximately 32 acres in area and contains rainbow trout, largemouth bass, black crappie, and green sunfish (SDGFP 2007). The reservoir is currently managed as a trout fishery (rainbow trout) with monthly stocking when water temperatures permit adequate survival; bass are managed as natural yield.

Angostura Reservoir lies to the southeast of Hot Springs. The reservoir is classified as a warmwater permanent fishery. Primary species (game and forage) include walleye, channel catfish, smallmouth bass, gizzard shad, largemouth bass, black crappie, spottail shiner, and emerald shiner. Secondary and other species include bluegill, common carp, green sunfish, northern pike, northern redhorse, river carpsucker, white sucker, yellow perch, and freshwater drum (SDGFP 2013a).

#### 3.6.2.4.3 Rapid City

Rapid City is located primarily within the Rapid Creek watershed, with the Box Elder Creek watershed running just to the north of Rapid City. Rapid Creek is the largest stream in the Black Hills of western South Dakota. It is an important stream for anglers and has two dams on it creating Pactola Reservoir and Canyon Lake. Canyon Lake is a small reservoir (25 acres) located in the southwestern part of Rapid City. It is a popular for fishing and contains rainbow trout (stocked throughout the year), brown trout, and white sucker (SDGFP n.d.).

Like most streams in the Black Hills, Rapid Creek experienced drastic changes in flow over the past 15 years. Most of western South Dakota experienced moderate to severe drought from 2002 to 2008 (SDGFP 2013b), followed by four years of above average precipitation, and then lower than average precipitation in 2012. Drastically varying flow events likely changed fish populations and habitat throughout Rapid Creek.

Another stressor for Rapid Creek fish populations is the diatom *Didymosphenia geminata* (didymo or rock snot), that was discovered there in 2002. By 2004 large mats of didymo were present in the creek and generated complaints about aesthetics and water quality.

The majority of Rapid Creek and its tributaries are managed as a wild trout (natural yield) fishery. One area of Rapid Creek within Rapid City is managed for catch and release, from Jackson Boulevard upstream through the Meadowbrook Golf Course to Park Drive (SDGFP 2013b). Popular fishing areas with good access on Rapid Creek are around Pactola Reservoir and within Rapid City. As part of a statewide fisheries survey in 2013, eight species of fish were sampled in Rapid Creek. Brown trout were the most abundant in every segment and rainbow trout were found

in all five segments. Other species were found in low densities and included creek chub, longnose dace, white sucker, rock bass, mountain sucker, and bluegill. Most of these non-trout species occur near the reservoirs located on Rapid Creek (SDGFP 2013b). The SDGFP developed the *Fisheries Management Plan for Black Hills Streams 2015-2019* to guide fisheries management activities over the next five years (SDGFP n.d.).

The Box Elder Creek watershed lies north of the Rapid Creek watershed. The creek flows east through the northwest end of Rapid City and drains into the Cheyenne River south of Wasta, SD. A state fisheries survey conducted on the creek in 2012 captured eight species of fish; the most abundant species was longnose dace. From a game fish perspective, the creek appears to change from a brown trout fishery to a brook trout fishery with upstream progression. Other species found were mountain sucker, creek chub, stonecat, and black bullhead (SDGFP 2012a).

### **3.6.2.5      *Protected Species***

Protected and sensitive biological resources include listed (threatened or endangered), proposed, and candidate species under the *Endangered Species Act*; state-listed threatened or endangered species; and migratory birds. Sensitive habitats include those areas designated by the FWS as critical habitat and sensitive ecological areas as designated by state or federal rulings. Sensitive habitats can also include wetlands, plant communities that are unusual or of limited distribution, and important seasonal use areas for wildlife (such as migration routes, breeding areas, and crucial summer and winter habitats).

Federally and state listed threatened and endangered species in Fall River and Pennington Counties are listed in Table 3.6-1.

The *South Dakota Wildlife Action Plan* (SDGFP 2012b) addresses the protection of all fish and wildlife species, with a priority on “species of greatest conservation need”. The plan identifies essential habitats within the state, the habitats that have changed since the state was settled, which animal species need special attention to ensure their long-term survival, and ways to be more proactive in wildlife and habitat management. Table 3.6-2 lists the species of greatest conservation need whose habitat range includes all or part of Fall River or Pennington Counties, or are located within the portion of the Black Hills Ecoregion that lies at the fringe of Hot Springs and Rapid City areas, based on the current distribution map in the Plan.

**Table 3.6-1. Threatened and Endangered Species in Fall River and Pennington Counties**

Scientific Name	Common Name	Status	
		Federal	State
Fall River County			
<i>Anthus spragueii</i>	Sprague's pipit	Candidate	—
<i>Calidris canutus rufa</i>	Red knot	Threatened	—
<i>Centrocercus urophasianus</i>	Greater sage grouse	Candidate	—
<i>Chrosomos neogaeus</i>	Finescale dace	—	Endangered
<i>Haliaeetus leucocephalus</i>	Bald eagle	Delisted	Threatened
<i>Myotis septentrionalis</i>	Northern long-eared bat	Threatened	—
<i>Pandion haliaetus</i>	Osprey	—	Threatened
<i>Vulpe velox</i>	Swift fox	—	Threatened
Pennington County			
<i>Anthus spragueii</i>	Sprague's pipit	Candidate	—
<i>Calidris canutus rufa</i>	Red knot	Threatened	—
<i>Catostomus catostomus</i>	Longnose sucker	—	Threatened
<i>Cinclus mexicanus</i>	American dipper	—	Threatened
<i>Falco peregrinus</i>	Peregrine falcon	—	Endangered
<i>Grus americana</i>	Whooping crane	Endangered	Endangered
<i>Haliaeetus leucocephalus</i>	Bald eagle	Delisted	Threatened
<i>Lontra canadensis</i>	Northern river otter	—	Threatened
<i>Macrhybopsis gelida</i>	Sturgeon chub	—	Threatened
<i>Mustela nigripes</i>	Black-footed ferret	Endangered	Endangered
<i>Myotis septentrionalis</i>	Northern long-eared bat	Threatened	—
<i>Pandion haliaetus</i>	Osprey	—	Threatened
<i>Rhodiola integrifolia</i> ssp. <i>leedy</i>	Leedy's roseroot	Threatened	—
<i>Sterna antillarum</i>	Least tern (interior population)	Endangered	Endangered
<i>Vulpe velox</i>	Swift fox	—	Threatened

Source: FWS 2015; SDGFP 2015b.

**Table 3.6-2. Species of Greatest Conservation Need in Fall River and Pennington Counties.**

<b>Birds</b>	
Bald eagle (year round resident inside Black Hills ecoregion; summer resident outside region)	
Burrowing owl (summer)	
Ferruginous hawk (summer resident outside Black Hills region; migration inside region)	
Lark bunting – summer	
Northern goshawk (year round resident inside Black Hills region; winter resident outside region)	
Osprey (summer resident inside Black Hills region; migration outside region)	
Peregrine falcon – migration	
<b>Mammals</b>	<b>Insects</b>
Fringe tailed myotis (year-round)	Great Plains tiger beetle (year-round) <sup>a</sup>
Fringe tailed myotis (year-round)	Indian Creek tiger beetle (year-round) <sup>b</sup>
Silver haired bat (summer)	Iowa skipper (year-round) <sup>a</sup>
Townsend's big eared bat <sup>a</sup>	Little white tiger beetle (year-round) <sup>b</sup>
<b>Fish</b>	Ottoe skipper
Finescale dace (tributaries to Cheyenne) <sup>a</sup>	Regal fritillary (butterfly) (year-round)
Mountain sucker	<b>Flying Insects</b>
	Dakota stonefly (Cheyenne tributaries) <sup>a</sup>
	Dot-winged baskettail (Cheyenne tributaries) <sup>a</sup>

<sup>a</sup> Designated in Hot Springs area / Fall River County only.

<sup>b</sup> Designated in Rapid City area / Pennington County only.

Source: SDGFP 2012b.

Certain species that are protected under the *Migratory Bird Treaty Act* are present within the region at various times throughout the year given the state's proximity to the Central Flyway, a north-south migratory bird route. There are 24 migratory birds of concern in Fall River and Pennington Counties (FWS 2015):

American bittern	Lewis' woodpecker
bald eagle	loggerhead shrike
bell's vireo	long-billed curlew
black-billed cuckoo	marbled godwit
Brewer's sparrow	mountain plover (Fall River County only)
burrowing owl	pinyon jay
dickcissel	prairie falcon
ferruginous hawk	red headed woodpecker
golden eagle	sage thrasher
grasshopper sparrow	short-eared owl
greater sage-grouse	Swainson's hawk
Hudsonian godwit	upland sandpiper

## 3.7 Noise

Noise is defined as any sound that is undesired by the recipient and typically includes sounds not present in the natural environment, such as sounds emanating from aircraft; highways; and industrial, commercial, and residential sources. Noise generally interferes with normal activities or otherwise diminishes the quality of the natural environment. Noise may be intermittent or continuous, steady or impulsive, stationary or transient.

The standard measurement unit of sound is the decibel (dB), which represents the relationship between a measured sound pressure level and the minimum sound level a person with good hearing can detect reported on a logarithmic scale. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by three dB, and a halving of the energy would result in a three dB decrease, both of which are barely perceptible to the human ear.

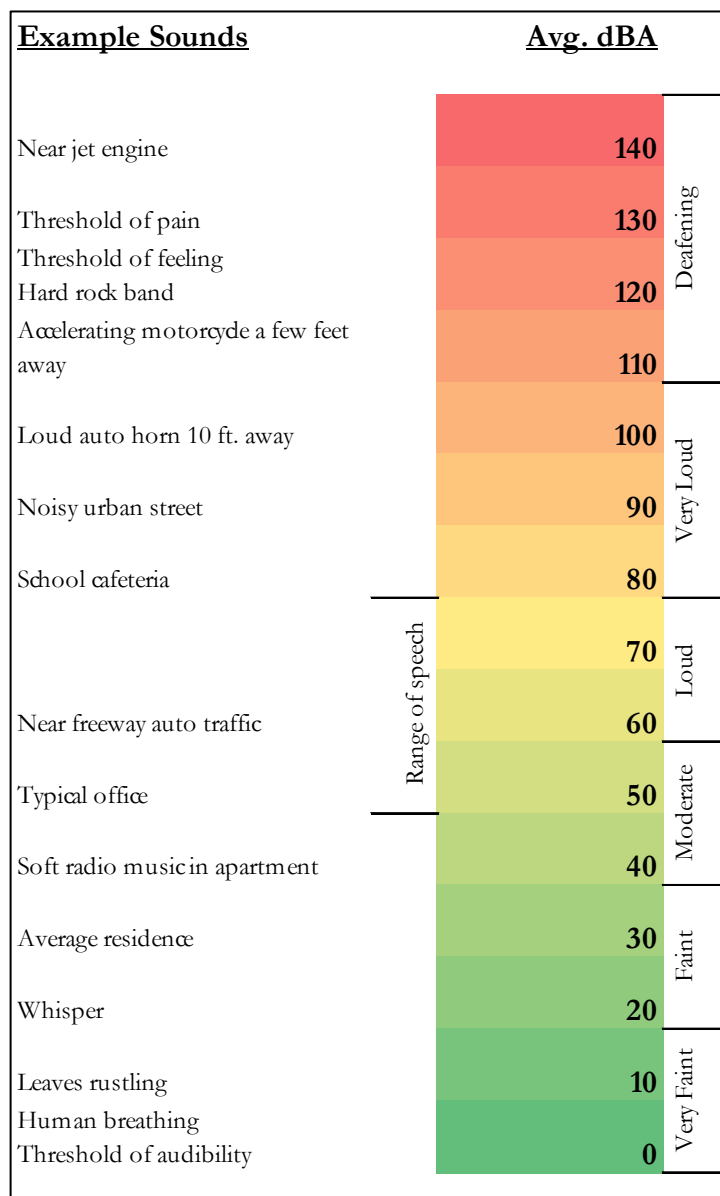
The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, sound can be characterized by several methods. The most common method is the “A-weighted” sound level (dBA), which gives greater weight to the frequencies audible to the human ear by filtering out noise frequencies not audible to the human ear. Human judgments of the relative loudness or annoyance of a sound correlate well with the dBA levels of those sounds. Therefore, the dBA scale is used for measurements and standards involving the human perception of noise. Figure 3.7-1 provides common sounds and the corresponding sound levels to demonstrate human perception of the correlation of noise with acoustical energy.

Noise levels vary continuously with time, and various descriptions of noise are used to account for this variance with time, including  $L_{eq}$  (which is the equivalent continuous sound level),  $L_{min}$  and  $L_{max}$  (which are the minimum and maximum noise levels recorded during a monitoring period), and  $L_{dn}$  (which is the day-night average sound level).

The construction and operation of new facilities generates noise. Construction-related noise is associated with the operation of construction equipment and vehicles, both in transit to/from and at the project site. Equipment noise levels also vary as a function of the usage factor or percentage of time the equipment is employed. Table 3.7-1 provides a list of noise levels associated with typical construction equipment.

The Roadway Construction Noise Model is a national noise screening model developed by the Federal Highway Administration to predict construction noise levels and determine compliance with regulatory noise limits.





Source: HUD 2009.

Figure 3.7-1. Common Sounds and Corresponding Sound Levels

**Table 3.7-1. Noise Levels Associated with Typical Construction Equipment.**

<b>Equipment</b>	<b>Typical Noise Level 50 feet from source (dBA)</b>	<b>Typical Usage Factor (%)</b>
Backhoe	80	40
Clam shovel (dropping)	93	20
Compactor (ground)	80	20
Compressor (air)	80	40
Concrete mixer truck	85	40
Concrete pump truck	82	20
Concrete saw	90	20
Crane	85	16
Dozer	85	40
Dump truck	84	40
Excavator	85	40
Flat bed truck	84	40
Front end loader	80	40
Generator	82	50
Grader	85	40
Jackhammer	85	20
Man lift	85	20
Pickup truck	55	40
Pneumatic tools	85	50
Pumps	77	50
Scraper	85	40
Tractor	84	40
Warning horn	85	5

Source: FHWA 2006.

Note: Typical construction equipment selected from Roadway Construction Noise Model default equipment list.

Ground-borne vibration is commonly associated with noise since vibration sources include many of the same sources (for example, construction equipment and vehicles) and may also interfere with normal activities or otherwise diminish the quality of the natural environment. Ground-borne vibration is not a common environmental problem, as it is unusual for vibration from sources such as road vehicles to be perceptible, even in locations close to major roads. Perceptible vibration sources for projects similar to that analyzed in this EIS include construction-related equipment (for example, heavy earth-moving equipment and pile-driving equipment).

Ground-borne vibration is typically reported as the root mean square of the vibration velocity level in vibration decibels. The approximate threshold for human perception of vibration is 65 vibration decibels.

### 3.7.1 Regulatory Framework

#### 3.7.1.1 Noise Control Act

The U.S. EPA Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. Upon its enactment, the office also implemented the *Federal Noise Control Act* of 1972, which established programs and guidelines to identify and address the effects of noise on public health and welfare and the environment. Table 3.7-2 summarizes recommended guidelines for noise levels considered safe for community exposure without the risk of adverse health or welfare effect (EPA 1974). To prevent hearing loss over the lifetime of a receptor, the yearly average  $L_{eq}$  should not exceed 70 dBA, and the  $L_{dn}$  should not exceed 55 dBA in outdoor activity areas or 45 dBA indoors to prevent interference and annoyance.

**Table 3.7-2. Summary of EPA-Recommended Noise Level Standards**

Effect	Level	Area
Hearing loss	$L_{eq(24)} \leq 70$ dB	All areas
Outdoor activity interference and annoyance	$L_{dn} \leq 55$ dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use
	$L_{eq(24)} \leq 55$ dB	Outdoor areas where people spend limited amounts of time, such as school yards and playgrounds
Indoor activity interference and annoyance	$L_{dn} \leq 45$ dB	Indoor residential areas
	$L_{eq(24)} \leq 45$ dB	Other indoor areas with human activities such as schools

Source: EPA 1974.

In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982, responsibilities for regulating noise control policies were transferred to state and local governments. However, noise control guidelines and regulations contained in the rulings by EPA in prior years are still upheld by designated federal agencies, allowing more individualized control for specific issues by designated federal, state, and local government agencies. The *Noise Control Act* is applicable to the project insofar as it establishes general guidelines for acceptable noise levels perceived by adjacent or onsite receptors.

#### 3.7.1.2 Federal Transit Authority Ground-Borne Vibration Guidelines

The Federal Transit Authority has established guidelines for maximum-acceptable vibration criteria for different land uses. Maximum acceptable vibration criteria based on the frequency of an event are applied to the different land uses to address the human response to ground-borne vibration (FTA 2006).

The Federal Transit Authority also established criteria addressing the potential for construction-caused vibration annoyance or interference. The primary concern related to construction vibration is the potential to cause structural damage to buildings by the operation of heavy-duty construction equipment. Situation-specific criteria address the level of vibration considered acceptable before it may result in damage to structures or different building types (FTA 2006).

### **3.7.1.3 Department of Veterans Affairs Master Construction Specifications, Temporary Environmental Controls**

Section 01 57 19 of VA's master construction specification includes specific mitigating actions that would be required of any development on VA property to reduce construction-related noise (VA 2011). In particular, construction activities would mainly be limited to the hours of 8:00 a.m. to 6:00 p.m. and would abide by local noise ordinances. In addition, all equipment is required to be properly maintained and muffled such that noise levels of specific equipment would not exceed those shown in Table 3.7-3. VA also requires monitoring of noise levels at least once every five days during high noise generating construction activities.

**Table 3.7-3. Maximum Permissible Construction Equipment Noise Levels.**

<b>Earthmoving Equipment</b>	<b>Maximum Permissible Noise Level (<math>L_{max}</math>) (dBA)</b>	<b>Materials Handling Equipment</b>	<b>Maximum Permissible Noise Level (<math>L_{max}</math>) (dBA)</b>
Front loader	75	Concrete mixer	75
Backhoe	75	Concrete pump	75
Dozer	75	Crane	75
Tractor	75	Derrick, impact	75
Scraper	80	Pile driver	95
Grader	75	Jack hammer	75
Truck	75	Rock drill	80
Paver	80	Pneumatic tools	80
Pump	75	Saw	75
Generator	75	Vibrator	75
Compressor	75		

Source: VA 2011.

Note: Maximum permissible construction equipment noise level measured at 50 feet from source.

### **3.7.1.4 Local Noise Control Ordinances**

According to Rapid City Ordinance 10.20.020(A), "Every motor vehicle shall, at all times, be equipped with a muffler in good working order and in constant operation to prevent excessive raucous or unusually loud noise, smoke or flame, and no person shall operate a motor vehicle upon the streets and highways of the city which is not so equipped, or which is equipped with a muffler cutout, bypass, Hollywood pipes or any similar device."

## 3.7.2 Current Conditions

For each project area, noise-sensitive land uses were identified. Noise-sensitive land uses include:

- Nearby residential areas
- Schools
- Hospitals
- Hotels/motel;
- Churches/cemeteries
- Libraries
- Public parks

Baseline sound levels were measured at representative locations in the vicinity of each currently operating facility. Sound levels were measured using an Extech Instruments Model 407736 digital sound level meter, which meets American National Standards Institute S1.4-1983 and International Electrotechnical Commission 60651 Type II standards. The meter's internal calibration feature was checked prior to obtaining measurements at each location, and the meter was operated on the A-weighting scale with slow response using a porous windscreen. Sound level measurements were taken at intervals over a recorded monitoring period at each location. Notes regarding monitoring conditions were recorded, and the  $L_{eq}$ ,  $L_{min}$ ,  $L_{max}$ , and 10-, 50-, and 90-percentile ( $L_{10}$ ,  $L_{50}$ , and  $L_{90}$ ) values were determined.

### 3.7.2.1 Hot Springs Area

The Hot Springs area is generally consistent with an urban or suburban setting. As such, the predominant noise sources in the area include mobile sources (such as personal and commercial vehicles) and stationary sources (such as heating, ventilation, and air conditioning units attached to buildings). Vehicle traffic and associated noise is heaviest along U.S. Highway 18 (University Avenue), U.S. Highway 18 Bypass (Indianapolis Avenue), and U.S. Highway 385 (N. River Street / Fall River Road).

Noise-sensitive land uses in the Hot Springs area were identified and mapped (see Figure 3.7-2). Table 3.7-4 lists the noise-sensitive receptors and their proximity to the existing Hot Springs Campus. Hotels/motels, places of worship, and residential areas are also considered noise-sensitive land uses; these land uses were not depicted in Figure 3.7-2 due to their great numbers in the project area.

**Table 3.7-4. Noise-Sensitive Receptors in Hot Springs Area.**

Receptors within 0.5 miles of Hot Springs Campus: <ul style="list-style-type: none"> <li>• National Cemetery</li> <li>• Kidney Spring Park</li> </ul>	Receptors within 1 mile of Hot Springs Campus: <ul style="list-style-type: none"> <li>• Evergreen Cemetery</li> <li>• Chautauqua Park</li> <li>• Centennial Park</li> <li>• Brookside Park</li> <li>• Hot Springs Elementary School</li> <li>• Hot Springs Middle/High School</li> <li>• Bethesda Lutheran School</li> </ul>
Receptors within 1.5 miles of Hot Springs Campus: <ul style="list-style-type: none"> <li>• Butler Park</li> <li>• Hot Springs Library</li> </ul>	Receptors within 2 miles of Hot Springs Campus: <ul style="list-style-type: none"> <li>• State Home Cemetery</li> <li>• Fall River Hospital</li> <li>• Umiker Park</li> </ul>



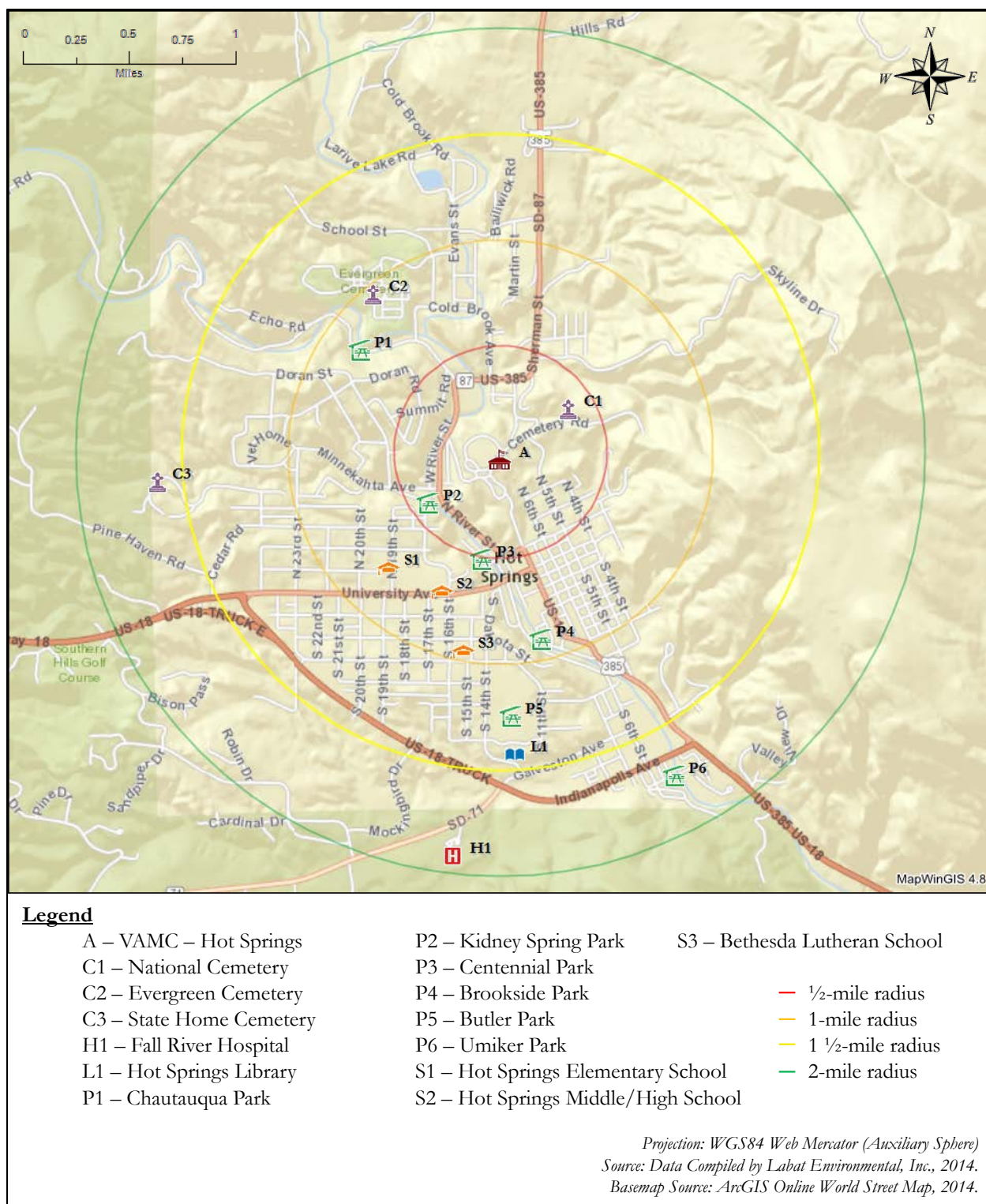


Figure 3.7-2. Hot Springs Area Noise-Sensitive Receptors.

Sound level measurements were collected at four locations in the Hot Springs area to determine representative existing sound levels. These monitoring locations are shown in Figure 3.7-3. Sound levels were measured using an Extech Instruments Model 407736 digital sound level meter. Notes regarding monitoring conditions were recorded, and the  $L_{eq}$ ,  $L_{10}$ ,  $L_{50}$ ,  $L_{90}$ ,  $L_{min}$ , and  $L_{max}$  values were determined (see Table 3.7-5). The measured daytime sound levels are characteristic of a typical urban area.

Noise-sensitive buildings are also commonly considered as vibration-sensitive receptors. Historic or lightweight buildings are considered most vulnerable to vibration disturbance or damage. Vibration due to passing vehicles was not noticeable during the collection of sound level measurements.

**Table 3.7-5. Existing Sound Level Measurements in the Hot Springs Area.**

Site	Location	Time	Sound Level (dBA)					
			$L_{eq}$	$L_{max}$	$L_{10}$	$L_{50}$	$L_{90}$	$L_{min}$
1	Butler Park	7:50 a.m.	48.1	52.2	50.4	47.4	46.7	46.5
2	Hot Springs Campus	8:06 a.m.	47.9	50.3	48.9	47.6	46.8	46.5
		9:50 a.m.	48.0	50.7	49.5	47.6	46.8	46.5
3	Near Chautauqua Park	8:23 a.m.	51.9	66.4	48.0	47.5	47.0	46.9
4	Centennial Park	9:33 a.m.	51.8	61.9	52.4	48.7	47.5	47.0

Source: Data collected by Labat Environmental, Inc., November 17, 2014.

Key:  $L_{eq}$  = equivalent sound level,  $L_{MIN}$  = minimum sound level,  $L_{max}$  = maximum sound level,  $L_n$  = sound level exceeded n% of the specific time period.

Observation Notes:

- Site 1: Quiet calm morning, occasional vehicles passing approximately 100 feet away.
- Site 2: Quiet calm morning, occasional vehicles passing approximately 150 feet away.
- Site 3: Quiet calm morning, occasional vehicles passing adjacent to location.
- Site 4: Quiet breezy morning, occasional vehicles passing adjacent to location.

### 3.7.2.2 Rapid City Area

The Rapid City area is generally consistent with an urban setting. As such, the predominant noise sources in the area include mobile sources (such as personal and commercial vehicles) and stationary sources (such as heating, ventilation, and air conditioning units attached to buildings). Vehicle traffic (and associated noise) is heaviest along Interstate 90, U.S Highway 16 (Mount Rushmore Road), SD-79 (St. Joseph Street / Main Street), and SD-44 (Omaha Street).

Noise-sensitive land uses in the Rapid City area were identified and mapped. Figure 3.7-4 shows noise-sensitive land uses in the vicinity of the existing Rapid City CBOC, and Figure 3.7-5 shows noise-sensitive land uses in the Rapid City metropolitan area. Table 3.7-6 lists noise-sensitive receptors and their proximity to the existing Rapid City CBOC. Hotels/motels, places of worship, and residential areas are also considered noise-sensitive land uses; these land uses were not depicted in Figures 3.7-4 and 3.7-5 due to their great numbers.



Figure 3.7-3. Hot Springs Area Sound Level Monitoring Locations.



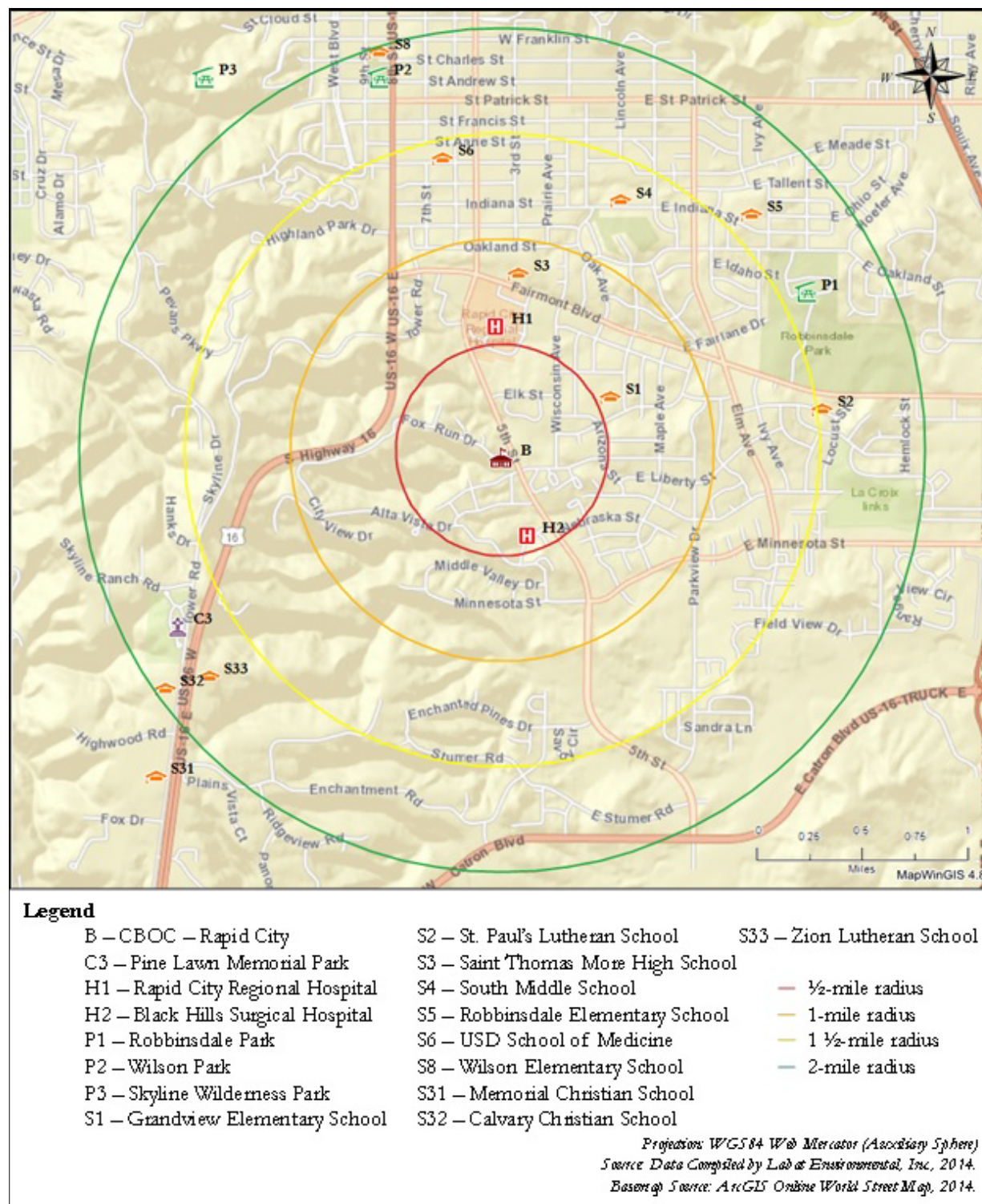


Figure 3.7-4. Rapid City Area Noise-Sensitive Receptors (CBOC Vicinity).

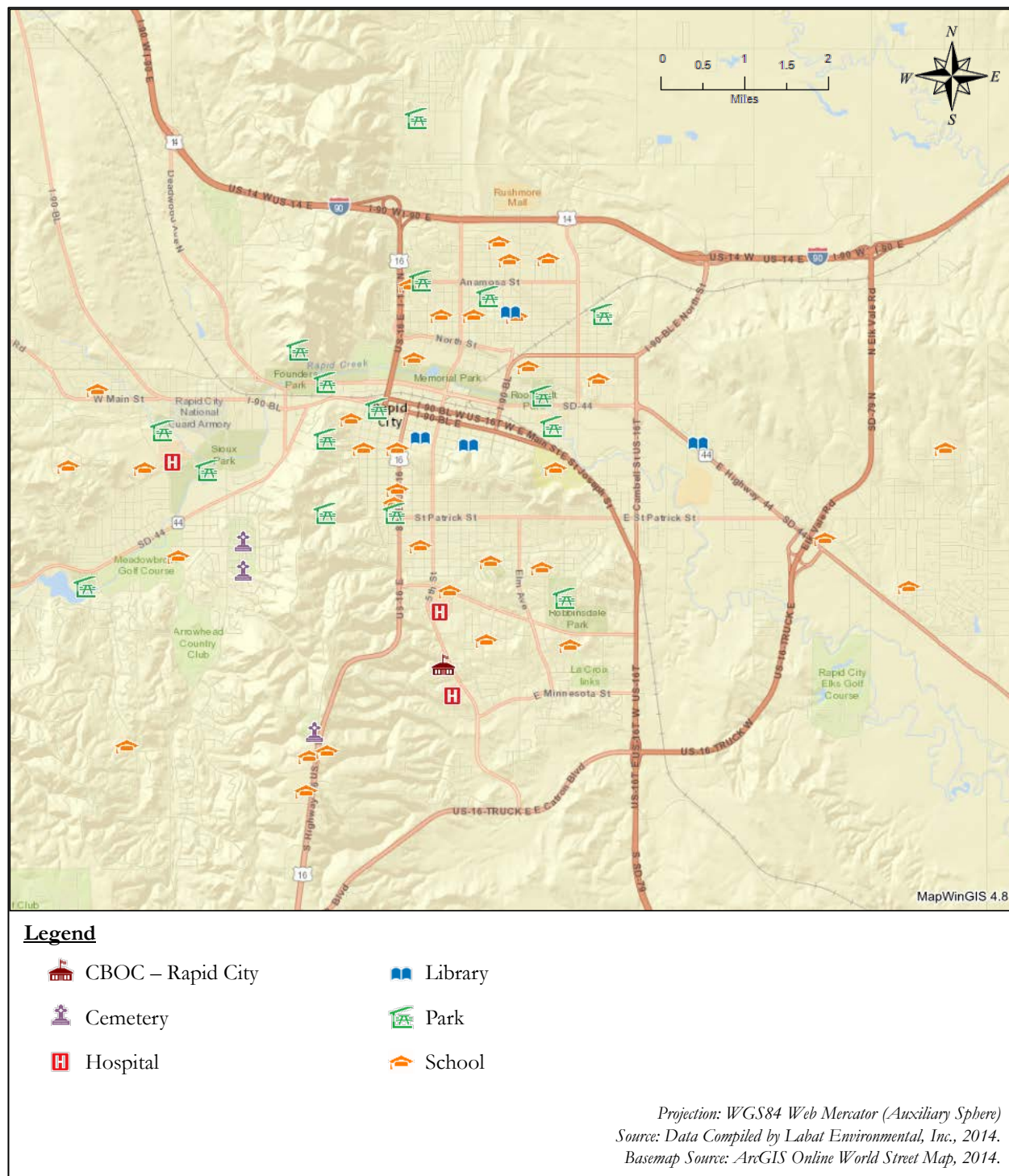


Figure 3.7-5. Rapid City Area Noise-Sensitive Receptors.

**Table 3.7-6. Noise-Sensitive Receptors in Vicinity of Rapid City CBOC.**

Receptors within 0.5 miles of Rapid City CBOC: <ul style="list-style-type: none"> <li>Black Hills Surgical Hospital</li> </ul>	Receptors within 1 mile of Rapid City CBOC: <ul style="list-style-type: none"> <li>Rapid City Regional Hospital</li> <li>Grandview Elementary School</li> <li>Saint Thomas More High School</li> </ul>
Receptors within 1.5-miles of Rapid City CBOC: <ul style="list-style-type: none"> <li>South Middle School</li> <li>University of South Dakota School of Medicine</li> </ul>	Receptors within 2 miles of Rapid City CBOC: <ul style="list-style-type: none"> <li>Pine Lawn Memorial Park</li> <li>Robbinsdale Park</li> <li>Wilson Park</li> <li>St. Paul's Lutheran School</li> <li>Robbinsdale Elementary School</li> <li>Wilson Elementary School</li> <li>Calvary Christian School</li> <li>Zion Lutheran School</li> </ul>

Sound level measurements were collected at four locations in the Rapid City area to determine the representative existing sound levels. These monitoring locations are shown in Figure 3.7-6. Sound levels were measured using an Extech Instruments Model 407736 digital sound level meter. Notes regarding monitoring conditions were recorded, and the  $L_{eq}$ ,  $L_{10}$ ,  $L_{50}$ ,  $L_{90}$ ,  $L_{min}$ , and  $L_{max}$  values were determined (see Table 3.7-7). The measured daytime sound levels are characteristic of a typical urban area.

Noise-sensitive buildings are also commonly considered as vibration-sensitive receptors. Historic or lightweight buildings are considered most vulnerable to vibration disturbance or damage. Vibration due to passing vehicles was not noticeable during the collection of sound level measurements.

**Table 3.7-7. Existing Sound Level Measurements in the Rapid City Area**

Site	Location	Time	Sound Level [dBA]					
			$L_{eq}$	$L_{max}$	$L_{10}$	$L_{50}$	$L_{90}$	$L_{MIN}$
1	Rapid City CBOC	10:52 AM	54.3	64.4	55.5	52.9	51.1	50.3
2	Rapid City Reg. Hospital	11:07 AM	53.5	57.7	55.4	52.8	50.4	49.9
3	Robbinsdale Park	11:23 AM	57.6	65.2	60.3	56.6	52.5	51.1
4	Rushmore Mall	11:46 AM	55.6	66.3	57.1	53.2	51.4	50.7

Source: Data collected by Labat Environmental, Inc., November 17, 2014.

Key:  $L_{eq}$  = equivalent sound level,  $L_{MIN}$  = minimum sound level,  $L_{max}$  = maximum sound level,  $L_n$  = sound level exceeded n% of the specific time period.

Observation Notes:

Site 1: Breezy day, cars passing by approximately 100 feet away on active roadway.

Site 2: Breezy day, gusty winds, cars passing by approximately 200 feet away on active roadway.

Site 3: Gusty winds, cars passing by adjacent to location, people talking and yelling.

Site 4: Gusty winds, I-90 approximately 500 feet away, cars passing adjacent to location.



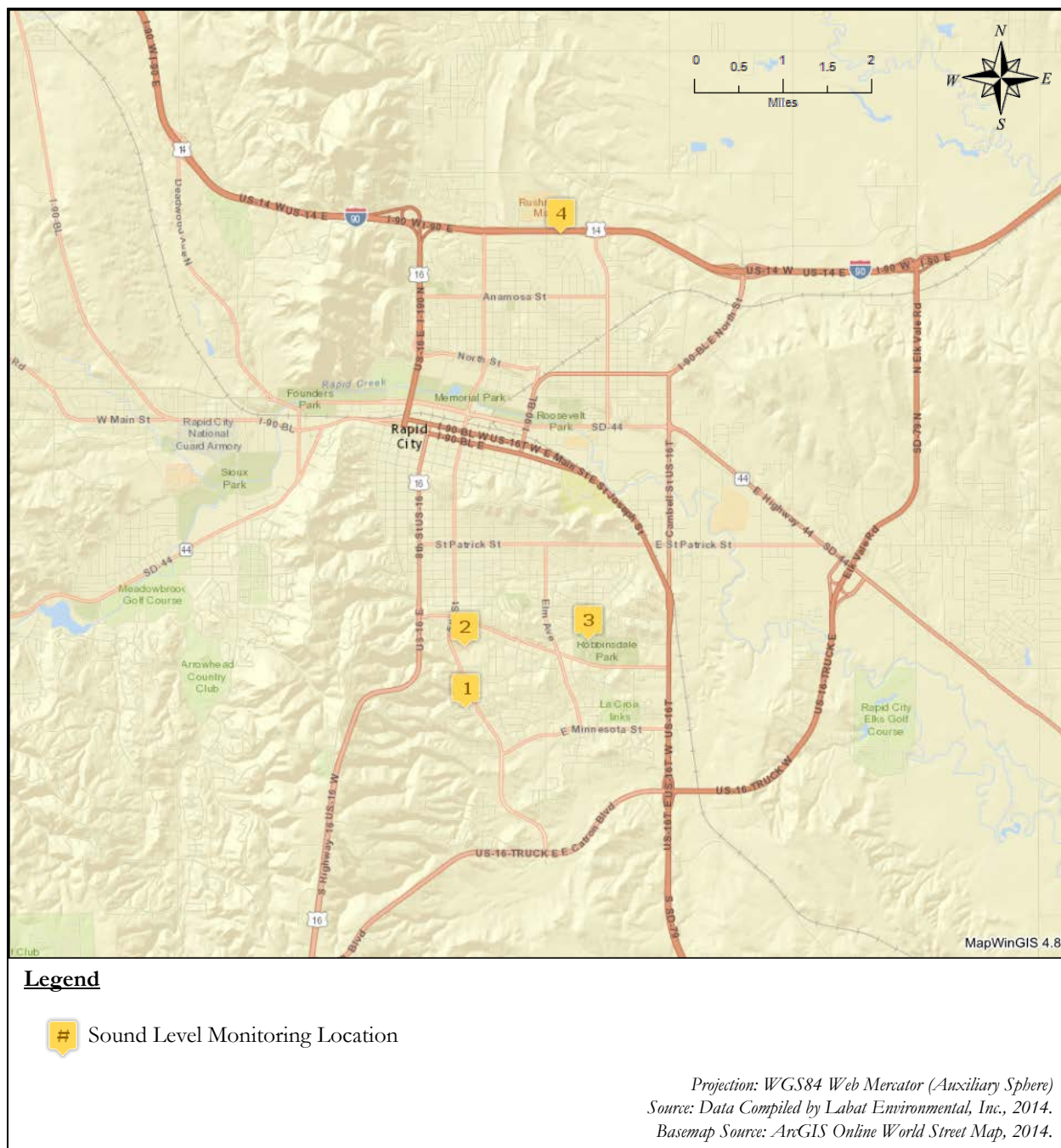


Figure 3.7-6. Rapid City Area Sound Level Monitoring Locations.

## 3.8 Land Use

Land use is defined by the physical and functional arrangement of and interrelationships between structures, transportation systems, utilities, uses, and open lands. Human decisions and actions create, influence, and are subject to these physical and functional systems.

To the extent enabled by law, most communities attempt to manage land use in ways that will promote orderly development and limit the negative impacts of unplanned, unregulated random development. While the benchmark of what constitutes orderly development varies widely, the tools used to accomplish orderly development are common and include comprehensive plans and zoning regulations. Prudent planning, combined with land use regulations designed to accomplish plan objectives, can increase the likelihood of orderly growth.

### 3.8.1 Regulatory and Policy Framework

Several VA documents address various aspects of siting and designing different types of VA health care facilities including land use compatibility and constraints. Consideration is given to local land use planning and zoning ordinances even if VA is not legally required to comply with them.

#### 3.8.1.1 VA Directive and Guidelines

##### 3.8.1.1.1 VA Directive 0066, Sustainable Locations

In fiscal year (FY) 2012, VA issued Directive 0066 regarding sustainable locations for VA facilities. This directive states that VA will:

- advance local and regional planning goals
- seek location-efficient sites that
  - prioritize central business districts and rural town centers,
  - prioritize locations that promote transportation choice,
  - promote walkable and bikeable sites,
  - locate in areas that are accessible to a diverse range of employees and visitors
- maximize use of existing resources by
  - prioritizing areas that are currently well-served by water, sewer and other relevant public infrastructure
  - prioritizing brownfield/grayfield and infill development, including historic districts
  - emphasizing the preservation and re-use of historic and other existing buildings
- foster protection of the natural environment by
  - preserving existing ecosystems
  - avoiding development of green space
  - promoting climate change adaptation planning

In choosing sites for new medical facilities, VA deploys a strategy to minimize greenfield construction (that is, construction in a previously undeveloped location). VA's Sustainable Design Manual (VA 2014a) promotes the practice of sustainable siting.

### 3.8.1.1.2 VA Mental Health Facilities Design Guide

The VA *Mental Health Facilities Design Guide* (VA 2014b) makes specific reference to local zoning: “Unlike many general aspects of site design such as roadways and parking aisles, zoning is site specific. Preliminary plans should not advance without performing a zoning analysis. In the case of government-owned property, it is important to consider the zoning and adjacencies for compatibility with neighboring buildings.” The design guide factors for zoning include:

- Height
- Lot occupancy
- Number of stories
- Parking
- Green space
- Historic district
- Floor area ratio (ratio of the total area of all floors of a building to the area of the parcel)
- Setbacks
- Use groups

According to VA, an RRTP should be developed as part of a larger campus with compatible uses or adjacent to such uses, so that efficiencies and operations are enhanced. Landscaping is also emphasized in VA’s design guides.

### 3.8.1.1.3 VA Outpatient Clinic Design Guide and Standards for Leased CBOC Facilities

The VA *Outpatient Clinic Design Guide* (VA 2009a) includes criteria for site selection. The clinic site should be in a neighborhood with prime commercial or medical office space, or with research, clinical, or technology space that is suitable for medical uses. The neighborhood should present a professional image and offer a feeling of security for patients and personnel. Other selection factors include:

- Topography without steep grades and not within the 100-year or 500-year floodplains.
- No environmental hazards or restrictions.
- Prominent visibility from major public thoroughfares.
- Ingress/egress easily accessible from major public thoroughfares.
- Convenient to regularly scheduled public transportation.

VA’s standards for leased CBOC facilities (VA 2009b) include the same site selection criteria listed above, in addition to being within two miles of laboratory and x-ray facilities, evidence of compliance with local zoning laws or variance approvals, and evidence of compliance with any specific zoning conditions that may be required in order to develop the property.

### 3.8.1.1.4 VA Site Development Design Manual

VA has published a comprehensive Site Development Design Manual (VA 2013) concerning a wide range of issues, and incorporates contemporary practices such as low-impact development and green building principles (LEED – Leadership in Energy & Environmental Design). This guidance

addresses sustainability, stormwater management, energy and water conservation, linkages to adjacent and proximal uses, solar orientation, pedestrian and bike paths, various benefits of and approaches to site landscaping, and other topics.

### **3.8.1.2 Local Land Use Planning**

Land use in the State of South Dakota is primarily regulated through county and municipal planning and zoning ordinances, as well as subdivision platting requirements. South Dakota state laws specifically grant this local authority (11 South Dakota Codified Laws [SDCL] 2, 4, 6; 9 SDCL 9-12(3)).

#### **3.8.1.2.1 Fall River County**

Fall River County does not at present have a comprehensive plan or a transportation plan, but has a land use policy adopted by the County Commission (Fall River County 2011). Policy #2011-01, “Land Use Policy for Fall River County” states that:

- The Commission opposes the following actions:
  - Reduction in grazing allotments or changes that would hamper agricultural industry
  - Reduction in public access to public lands
  - Road closures or travel restrictions on public lands
  - The introduction or re-introduction of any species not currently present except biological control of noxious weeds and invasive plant species
  - The introduction or re-introduction of any predator animals
  - Further additions to public land unless an equal value of land is returned to private ownership
  - Restriction on public access to archaeological resources
- The Commission supports or favors the following actions:
  - Control of any existing predators
  - Immediate attention to disease outbreak or infestation in the forests or grasslands
  - Good forestry management, well managed timber sales, and safe mineral extraction
  - Agricultural and recreational activity on public land to include, but not be limited to, livestock grazing, hunting, hiking, ATV riding, rock hounding, horse-back riding, sight-seeing, photography, or camping

#### **3.8.1.2.2 Pennington County**

The Pennington County Comprehensive Plan was adopted in August of 2003 by the Board of County Commissioners (Pennington County 2003).

Rapid City is the largest community in the county, with roughly 71,000 of the county’s 106,000 residents in 2013. At the time the plan was developed, it was anticipated that over 75 percent of future population growth in the county would occur within Rapid City. It was also anticipated that Rapid City’s position as a “regional healthcare, educational and retail center” would lead to

additional service sector employment and that the area would continue to attract retirees. The future land use map focuses urban growth toward areas that have sufficient infrastructure and public services, such as water, sanitary sewer, access, and public safety. The plan is not specific in regard to health care and related services.

### 3.8.1.2.3 Hot Springs Comprehensive Plan

The current comprehensive plan was written in the early 1980s based on the data cited within it (Hot Springs n.d.). The plan was partly based on the assumption that the VA Hot Springs facility would continue to grow. The population projections of 6,000 to 7,000 persons by the year 2000 have not occurred compared to the current population of 3,800. Thus, instead of specifics, this overview summarizes the basic goals and policies within the plan.

The stated land use goal is “To establish a land use pattern which will enhance and preserve the environment while allowing new growth and development to occur, and to preserve those fragile natural areas and features which contribute to the present community character and atmosphere.” The stated land use objectives are:

- Protect prime irrigated agricultural lands from development and direct future urban growth toward dry land areas.
- Prohibit development in natural hazard areas (floodplains, steeply sloping areas, and unstable geologic areas).
- Promote clustering activities to discourage costly urban sprawl and inefficient land use.
- Preserve unique and sensitive natural areas (lakes, unique scenic vista, unique natural areas, wildlife habitats, and aquifer recharge areas).
- Provide intensified land uses adjacent to transportation facilities.
- Utilize open space as a means of preserving and protecting the natural environment.
- Support reasonable air, water, and land quality management programs.
- Review adjoining unincorporated areas, with the goal of obtaining mutual benefits in annexation procedures.
- Acquisition of land for a second landfill site outside the City.
- Develop annexation procedures to ensure the orderly development of the City. Cooperation between City and County should be fostered in efforts to control growth in the three mile area. Examine the following areas for possible future annexation:
  - The area along Fall River Road
  - The west edge of the City (north and south of U.S. Highway 18), including the Municipal Golf Course
  - The area north of Cold Brook
  - The area along U.S. Highway 385 (north of City)
  - The area south of the City along Cascade Road



The plan recognizes the VA Hot Springs facility stating it “should continue to play a major role in the economic vitality of Hot Springs [and] will continue to grow in size and importance.” Other objectives included the need to reserve land for future development of public facilities and developing a long-range plan for providing new and expanding facilities to meet the community’s needs.

Residential development within the city is separated into two distinct types: suburban residential, which includes areas for medium residential development; and mountain residential, which includes areas that are natural or scenic home site locations. Projected residential development (as of circa 1980) was expected to increase south and east along U.S. Highway 385, north of U.S. Highway 385, west of U.S. Highway 18, and south along Cascade Road.

Major traffic generators identified within the comprehensive plan included the VA Hot Springs Campus and other “destination” uses, such as Evans Plunge and the downtown business area. The plan states that these areas with more traffic need to be serviced with adequate streets and lanes to meet expected growth along with the anticipated population increase.

#### **3.8.1.2.4 Rapid City Comprehensive Plan**

The Rapid City Comprehensive Plan, updated in 2014, describes how the city’s economic vitality is weighted towards tourism, healthcare, retail and the military; however the city’s focus is to support efforts to diversify its economic base (Rapid City 2014a). Rapid City has adopted a strategic goal to be “nationally recognized by industry trade measures as a premier regional hub for health care,” and to “enhance the quality of healthcare services in the City to assure Rapid City is the regional destination for healthcare.”

The purpose of the city’s Regional Health Area is to continue to develop primarily as an area for medical uses and to focus on improving pedestrian amenities, infill development, and encouraging mixed land uses. Chapter 5 of the Comprehensive Plan, titled “A Safe, Healthy, Inclusive & Skilled Community (SHIS),” sets goals and policies for accessing health care services. Rapid City recognizes the need for improvement to health care facilities including enhanced access and adding new medical services. The following planning policies endorse health care services development within Rapid City:

- SHIS-3.3A Facility Coordination: Coordinate and collaborate with health and social service providers on the siting of new facilities. Encourage locations that are convenient for clients, and explore options for shared-use facilities to maximize efficiency and client access.
- SHIS-3.3B Multi-Modal Accessibility: Support improvements that increase opportunities for community members to access health and social services.
- SHIS-3.3C Nearby Housing: Encourage housing (especially for the elderly, disabled, low-income and other special populations) in close proximity to health and social service facilities to enhance convenience and provide opportunities for access without needing to drive.
- EC (Economic Stability & Growth)-2.2A Additional Health Care Services and Providers: Attract additional medical services and providers that are not currently present or are under-represented in Rapid City. Identify strategies to enhance and expand the medical services offered in Rapid City, support the expansion of existing health care services and facilities, and market the medical services available to the City.



The above policies encourage community housing, access, and medical services which provide convenient opportunities and reduce travel time for patients. The 2014 Comprehensive Plan further identifies the need to maintain and improve open spaces, park accessibility, and transportation near medical service areas. The plan identifies future land uses surrounding the VA BHHCS Rapid City CBOC for employment purposes located east and west of 5<sup>th</sup> Street, low residential south of Fox Road, and urban development on the southeastern corner surrounding 5<sup>th</sup> Street just south of the employment zone. In addition, regional medical facilities are expected to expand around the northern edge of U.S. Highway 16 (Rapid City 2014).

## **3.8.2 Current Conditions**

### **3.8.2.1 Hot Springs Area**

Land use in the Hot Springs area is primarily agriculture, grazing, and recreation. Land surrounding the city is under federal ownership by the U.S. Forest Service for Buffalo Gap National Grasslands and Black Hills National Forest, and by the U.S. Army Corps of Engineers (USACE) for Cold Brook and Cottonwood Springs reservoirs, and under state ownership by the South Dakota Game, Fish, and Parks.

Most of the city lies to the west of U.S. Highway 385 and includes a diverse mix of land uses, utility infrastructure, and road network. The Fall River Hospital is located at the far south end of Hot Springs, just outside the city limits. The Michael J. Fitzmaurice State Veterans Home is located in the northwestern corner of Hot Springs.

The City of Hot Springs Land Use Map and Zoning Ordinance (Hot Springs 2014) shows that land is used and zoned for Class A Residential Development located to the north and south of the VA Hot Springs Campus, General Commercial land uses to the west, and Mountain Residential to the east. The land use zones are shown in Figure 3.8-1.

The land use within Hot Springs north of the VA campus is primarily small single family homes, small-scale commercial and retail developments, Evans Plunge recreational facility, and a city park. Land use to the east is undeveloped private land at the foot of Battle Mountain, which is managed for recreation by the South Dakota Game, Fish, and Parks. Land use directly south of the campus is a moderate density residential neighborhood of single-family homes. Land use directly to the west of the campus is the commercial, retail, and hospitality business area along the historic River Street and the city park that parallels Fall River.

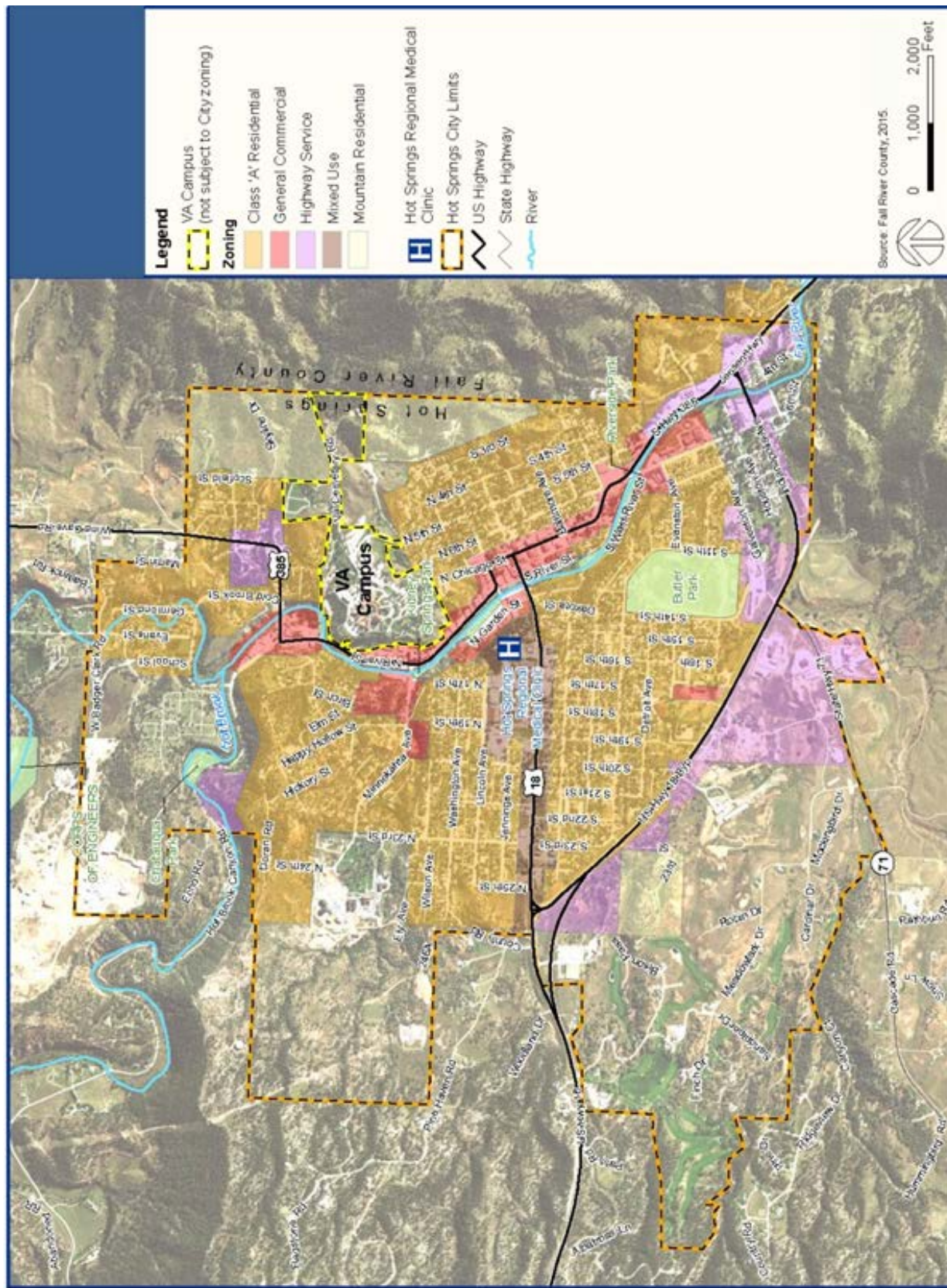


Figure 3.8-1. Hot Springs Zoning.

### **3.8.2.2 VA BHHCS Hot Springs Campus**

The VA Hot Springs Campus is located at 500 North 5<sup>th</sup> Street and encompasses 68 acres. The campus sits on a bluff north and east of the historic River Street business area of Hot Springs and overlooks the Fall River canyon. The campus has approximately 45 buildings connected by a curvilinear system of streets. The campus landscape plan and road system were designed by renowned city planner and architect George Kessler. Land use on the campus includes the medical services and administration complex, infrastructure and maintenance, housing, fire and security, Hot Springs National Cemetery, and open space.

The campus was intended to operate independent of its immediate surroundings, for the most part, and was not designed to incorporate significant physical or functional connections with adjacent lands and uses, with the exception of access. The campus' location on the bluff also segregates it topographically from River Street and commercial and retail uses to the west.

### **3.8.2.3 Rapid City Area**

Rapid City is located along the eastern edge of the Black Hills National Forest within Pennington County. Since the nineteenth century, Rapid City has developed as gateway to the Black Hills. Its location and setting made it an ideal distribution node for the northern plains region, and today it is served by major interstate highways and rail. The city is home to Camp Rapid, a U.S. Army National Guard base located approximately five miles northwest of the existing VA BHHCS CBOC. Ellsworth Air Force Base is just outside the city limits, approximately 15 miles northeast of the clinic. As a well-developed community, Rapid City has a full complement of public facilities including numerous parks, golf courses, and lakes. Regional and community health centers, and public and private schools are generally located east of U.S. Highway 16, south of Interstate 90 and north of Catron Boulevard.

Shown in Figure 3.8-2, the future land use map for Rapid City depicts the land use patterns across the city. It identifies specific land use categories, centers, and corridors associated with different locations or types of places within the community. Figure 3.8-3 shows the location and type of zoning within Rapid City. Future zone changes would generally adhere to the land use categories shown on the land use map.

### **3.8.2.4 VA BHHCS Community-Based Outpatient Clinic**

The VA BHHCS CBOC is located on 5<sup>th</sup> Street at Fox Run Drive in Rapid City. The CBOC is adjacent to the Colonial and Robbinsdale neighborhoods. According to the city's Planning Boundaries Map (Rapid City 2014), the VA BHHCS CBOC is located within the U.S. Highway 16 Neighborhood Area, the land use category is Employment (see Figure 3.8-2), and the area is currently zoned Office Commercial on the city's zoning map (see Figure 3.8-3).

The CBOC is surrounded by multi- and single-family developments, with a mix of apartments and homes defining the area as a suburban location. The surrounding zoning districts include Office Commercial, Low-Density Residential 1, Medium-Density Residential, General Commercial, and Civic Center.







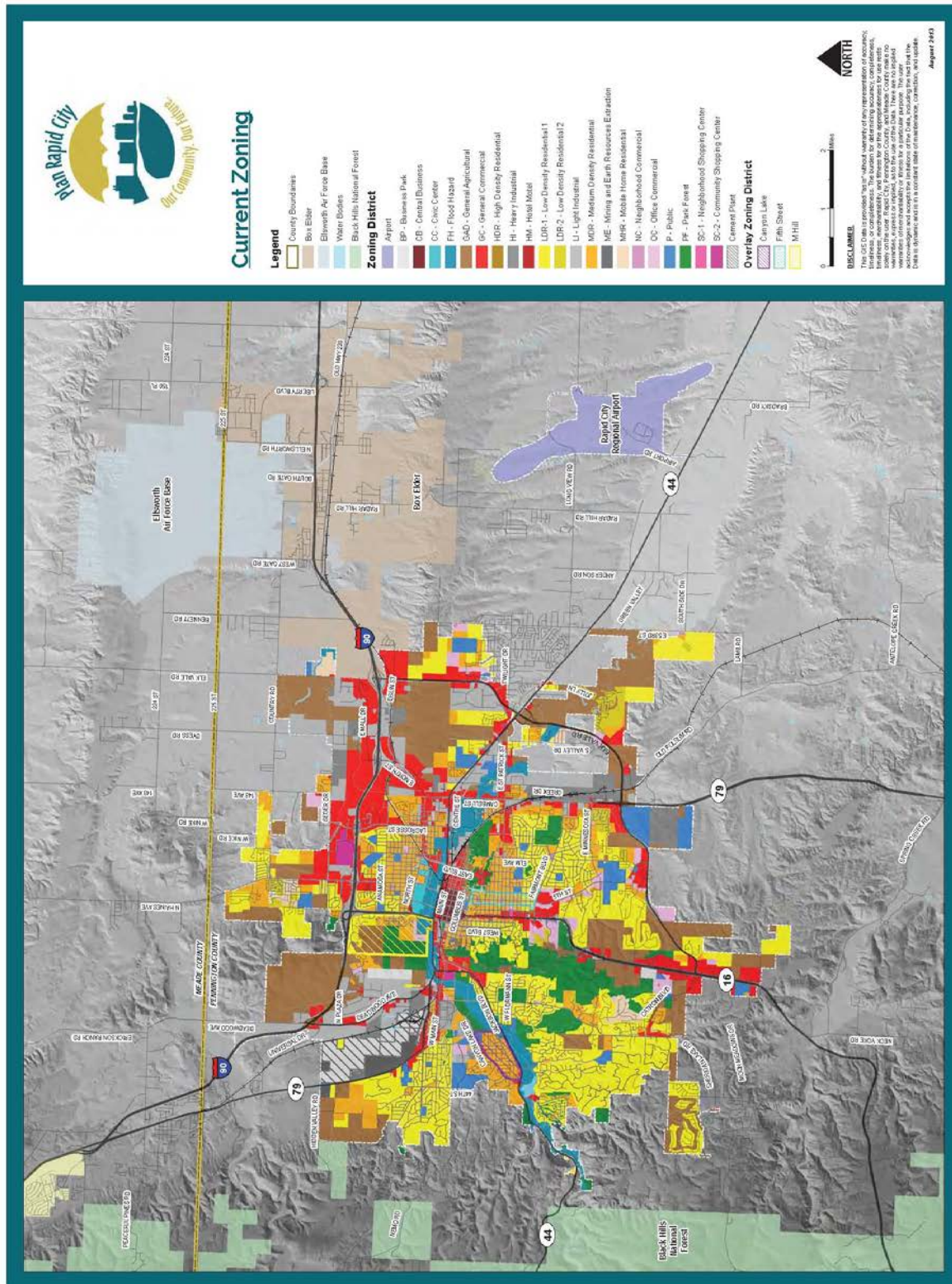


Figure 3.8-3. Rapid City Zoning.



## 3.9 Floodplains and Wetlands

A floodplain is the low-lying area adjacent to a river or stream that is periodically subject to flooding. A wetland is an area that is inundated or saturated by surface or groundwater and supports hydrophytic vegetation.

### 3.9.1 Regulatory and Policy Framework

Development in floodplains is regulated through the National Flood Insurance Program administered by the Federal Emergency Management Agency (FEMA) and managed through mutual agreements with local governments. The program regulates development in special flood hazard areas to prevent flooding, protect human health and safety, and minimize property damage caused by flooding. Special flood hazard areas are those areas subject to inundation by the one percent annual chance flood (commonly referred to as the 100-year flood). FEMA models the flooding potential within communities and delineates special flood hazard zones (collectively referred to as the 100-year floodplain) and other flood areas, which are published on Flood Insurance Rate Maps (FIRM). Designated flood-prone areas within the City of Hot Springs are regulated by its Code of Ordinances, Chapter 31, Flood Damage Prevention. Special flood hazard areas within the City of Rapid City are regulated by its Code of Ordinances, Chapter 32.15, Flood Area Construction Regulations.

Federal agencies are required to avoid or minimize actions that could adversely affect floodplains (Executive Order 11988, *Floodplain Management*; see Section 1.5). The VA Site Development Design Manual (VA 2013) provides direction for planning, siting, and designing VA facilities. The manual states that when siting a facility, floodplain functions should be protected by avoiding or limiting development within the 100-year floodplain. Development in floodplains should be limited to open spaces and recreation areas first, parking areas second, and structures only if absolutely necessary.

Development in wetlands is regulated under the *Clean Water Act* and as authorized by USACE, and by farmland conservation programs administered by the Natural Resources Conservation Service. Regulating the filling of wetlands is primarily to avoid damage to aquatic environments and to prevent degradation of water quality. Three indicators (hydric soil, hydrophytic vegetation, and wetland hydrology) must be present during some portion of the growing season to define an area as a wetland within the regulatory jurisdiction of the USACE. Although not all-encompassing, the National Wetland Inventory (NWI) maintained by FWS provides location information on possible wetlands. Not all wetlands shown on the NWI would meet the criteria required to delineate a regulated wetland. Federal agencies are required to avoid filling or modifying wetlands to the extent practicable (Executive Order 11990, *Protection of Wetlands*; see Section 1.5).

### 3.9.2 Current Conditions

#### 3.9.2.1 VA Hot Springs Campus

The VA Hot Springs Campus is located atop a bluff overlooking the Fall River that flows along the base of the bluff on the west and north. The campus sits about 100 feet above the Fall River channel, which is delineated on the Hot Springs FIRM (FEMA 2007) as a regulated floodway. There is minimal flood risk with no rivers, streams, or other surface water bodies on the campus. The campus is outside the 0.2 percent annual chance flood (commonly referred to as the 500-year flood),

which is labeled on the FIRM as an unshaded Zone X. The FIRM does not show any special flood hazard areas and the NWI (FWS 2015) does not identify any wetlands on the campus.

### 3.9.2.2 City of Hot Springs

The City of Hot Springs participates in the National Flood Insurance Program; the FIRM for the city was updated in 2007. The flood hazards are primarily Fall River, which flows approximately through the center of the city from north to south; Cold Brook Canyon Creek, which enters Fall River near the north end of the city; and an unnamed tributary, which enters Fall River along the south end of the city. The FEMA-designated 100-year floodplain in Hot Springs is shown on Figure 3.9-1.



Figure 3.9-1. Location of Flood-Prone Areas in Hot Springs.

As a regulated floodway, the channel and adjacent floodplain of Fall River must be kept free of encroachment to carry the 100-year flood. The floodplain is generally less than 150 feet wide through most of the city except at the confluence area with the unnamed tributary near the U.S. Highway 18 bypass intersection.

The unnamed tributary and Cold Brook Canyon Creek have designated areas subject to flooding by a 100-year flood. The 100-year floodplain of the unnamed tributary begins in Fall River County outside the south edge of the Hot Springs corporate limits and extends to the confluence with Fall River near U.S. Highway 18/385. The width of the floodplain varies from 200 to 400 feet and approaches 800 feet in the confluence area. The designation of the 100-year floodplain of Cold Brook Canyon Creek begins at the west edge of the Hot Springs corporate limits and extends to the confluence with Fall River. The width of the floodplain is mostly less than 100 feet but approaches approximately 150 to over 250 feet through a bend and at the confluence.

Fall River is considered “waters of the U.S.” and is therefore subject to the regulatory jurisdiction of USACE under the *Clean Water Act*. The NWI identifies an area of approximately one-half acre adjacent to Fall River between Jennings Avenue and U.S. Highway 18 as a wetland. It is defined as a riverine wetland with surface water present throughout the year except during times of drought. The NWI shows two other smaller wetlands less than one-quarter acre each located in the far northeast corner of the city. One is defined as seasonally flooded with emergent vegetation and the other is defined as a manmade pond. Two additional wetlands less than one-quarter acre and identified as manmade excavations are located southwest of the U.S. Highway 18 bypass.

### **3.9.2.3      *City of Rapid City***

The City of Rapid City participates in the National Flood Insurance Program; the FIRM for the city was updated in 2013. The flood hazards are primarily Rapid Creek, which flows through a major portion of the city from the southwest to the southeast, and a number of named and unnamed tributaries and drainages to Rapid Creek. The FEMA-designated special flood hazard zones and other flood areas in Rapid City are shown on Figure 3.9-2.





**Figure 3.9-2. Location of Flood-Prone Areas in Rapid City.**

The City of Rapid City implemented an extensive floodplain management program in the aftermath of the 1972 floods. Most of the 100-year floodplain of Rapid Creek has been converted to greenway occupied by parks, trails, golf courses, and open spaces. Flood hazard zones along Rapid Creek include the regulated floodway, 100- and 500-year floodplains, and areas of reduced flood risk due to levees. These flood-prone areas are extensive and collectively encompass many city blocks reaching over one-half mile in width in most locations.

Rapid Creek is considered “waters of the U.S.” and is therefore subject to the regulatory jurisdiction of USACE under the *Clean Water Act*. The NWI shows numerous areas as wetlands of different

shapes, sizes, and lengths throughout Rapid City, with most being located within or near the 100- and 500-year floodplains. The wetlands include seasonally and permanently flooded ponds (natural and manmade), seasonally and temporarily flooded palustrine wetlands with emergent vegetation, and temporarily flooded palustrine wetlands with forested vegetation.

The location of the existing CBOC is labeled on the FIRM as within unshaded Zone X, which is outside the 500-year floodplain in an area of minimal flood risk. Across 5<sup>th</sup> Street to the east of the CBOC, the NWI shows a temporarily flooded palustrine wetland with forested vegetation of approximately one-half acre. The wetland was created or modified by manmade flow obstructions.

## **3.10 Socioeconomics**

Socioeconomics are described using demographic and employment measures, as these measures influence the local economy and housing demand.

### **3.10.1 Regulatory and Policy Framework**

There are no federal standards relating to socioeconomics that apply to VA, and no state or local requirements to address. The regulatory framework for addressing socioeconomics is in the context of the human environment referred to in NEPA and defined by the CEQ regulations implementing NEPA. Economic or social effects will be discussed in an EIS when interrelated with the natural and physical environment (40 CFR 1508.14).

### **3.10.2 Current Conditions**

The VA BHHCS service area covers approximately 100,000 square miles and includes 34 counties in South Dakota, Nebraska, and Wyoming. Socioeconomic data are presented by the following groupings:

- Fall River County, South Dakota: location of the VA Hot Springs Campus and where components of the proposed reconfiguration would occur.
- Pennington County, South Dakota: location where components of the proposed reconfiguration would occur.
- Other South Dakota Counties: counties within the VA BHHCS service area, including Bennett, Butte, Corson, Custer, Dewey, Haakon, Harding, Hughes, Jackson, Jones, Lawrence, Lyman, Meade, Mellette, Oglala Lakota, Perkins, Stanley, Todd, Tripp, and Ziebach.
- Nebraska Counties: counties within the VA BHHCS service area, including Box Butte, Cherry, Dawes, Garden, Grant, Morrill, Scotts Bluff, Sheridan, and Sioux.
- Wyoming Counties: counties within the VA BHHCS service area, including Crook, Niobrara, and Weston.



### 3.10.2.1 Population

The total population within the VA BHHCS service area using the 2010 census was 349,864 people. As shown in Table 3.10-1, the population in the VA BHHCS service area is projected to increase by 10.5 percent between 2010 (349,864) and 2030 (386,625). Pennington County is projected to experience the highest population growth rate at 24 percent, while the population of Fall River County is projected to increase by 6.8 percent through 2030. The other South Dakota counties and Wyoming counties are projected to experience growth of 11.5 percent and 16.4 percent, respectively, while the Nebraska counties are projected to lose population (-10.0 percent).

**Table 3.10-1. Current and Projected Population in VA BHHCS Service Area.**

Counties in VA BHHCS Service Area	Population					Change 2010–2030
	2010	2015	2020	2025	2030	
Fall River, South Dakota*	7,094	7,262	7,394	7,500	7,575	+6.8%
Pennington, South Dakota	100,948	107,845	114,161	119,876	125,154	+24.0%
Other South Dakota	148,284	152,799	157,397	161,647	165,282	+11.5%
Nebraska	76,763	75,125	73,286	71,240	69,094	-10.0%
Wyoming	16,775	17,810	18,600	19,070	19,520	+16.4%
Total	349,864	360,841	370,838	379,333	386,625	+10.5%

\*Population for the City of Hot Springs, South Dakota, was 3,711 in 2010 and estimated at 3,532 in 2015 (Census 2016). Source: Census 2010; SD DLR 2015a; UnivNE 2009; WY DAI 2011.

### 3.10.2.2 Veteran Population

The Veteran population projection in the VA BHHCS service area for the fiscal year ending September 30, 2014 (FY 2014) was 35,007 Veterans. Table 3.10-2 shows the projected Veteran population through FY 2030 by the counties in the service area, along with the percent change over this time period. The population projections are those developed by VA's National Center for Veteran Analysis and Statistics; these projections of county-level Veteran population changes are the basis for VA's nationwide services and facilities planning. This analysis was based on the most recent projections available, which were modeled using 2013 Veteran population estimates. With the exception of Pennington County, the Veteran population is projected to decrease throughout the VA BHHCS service area with an overall decline (35,007 to 33,755) of 3.6 percent by the end of FY 2030.

**Table 3.10-2. Projected Veteran Population in VA BHHCS Service Area.**

Counties in VA BHHCS Service Area	Veteran Population				Change 2014–2030
	FY 2014	FY 2020	FY 2025	FY 2030	
Fall River, South Dakota	1,013	968	933	882	-12.9%
Pennington, South Dakota	12,433	12,767	12,919	12,973	+4.3%
Other South Dakota	14,136	13,699	13,263	12,931	-8.5%
Nebraska	5,733	5,592	5,481	5,352	-6.6%
Wyoming	1,692	1,661	1,634	1,617	-4.4%
Total	35,007	34,657	34,230	33,755	-3.6%

Source: VA 2015a.

Approximately 60 percent of the Veteran population in the VA BHHCS service area was enrolled in the VA health benefits program in FY 2014 (VA 2015a). Although the Veteran population is projected to decrease by FY 2030, enrollment to receive health care services is projected to increase to approximately 62 percent (VA 2015a).

### 3.10.2.3 Housing

Table 3.10-3 shows the number of housing units and the occupancy rate in the VA BHHCS service area between 2000 and 2010. A housing unit is defined by the U.S. Census Bureau as a house, apartment, mobile home or trailer, group of rooms, or a single room that is intended for occupancy as separate living quarters. The total number of housing units increased (144,645 to 160,220) by 10.8 percent, with Pennington County having the largest increase (37,249 to 44,949) at 20.7 percent and the Nebraska counties having the smallest increase (36,831 to 37,193) at 1.0 percent. Although the number of housing units increased across the service area, the occupancy rate of those units decreased slightly (87.8 to 87.2 percent). The exception is the Wyoming counties, with a small occupancy increase of 3.6 percent. Pennington County had the highest 2010 occupancy rate at 91.8 percent and Fall River County had the lowest rate at 78.1 percent. Fall River County also had the largest change in occupancy with a decrease of 3.9 percent. Approximately one-third of the occupied housing units are by renters in the counties throughout the service area, except for the Wyoming counties where renters occupy approximately one-fourth of the housing units (Census 2010).

**Table 3.10-3. Housing Units in VA BHHCS Service Area.**

Counties in VA BHHCS Service Area	Housing Units		Occupancy Rate		Change 2000–2010	
	2000	2010	2000	2010	Units	Rate
Fall River, South Dakota	3,812	4,191	82.0%	78.1%	9.9%	-3.9%
Pennington, South Dakota	37,249	44,949	93.0%	91.8%	20.7%	-1.2%
Other South Dakota	59,249	65,421	86.0%	85.6%	10.4%	-0.4%
Nebraska	36,831	37,193	87.7%	86.5%	1.0%	-1.2%
Wyoming	7,504	8,466	79.2%	82.8%	12.8%	+3.6%
Total	144,645	160,220	87.8%	87.2%	10.8%	-0.6%

Source: Census 2010.

### 3.10.2.4 Income

Median household income from the 2010 census is used as a benchmark to evaluate income levels in the VA BHHCS service area. Census data is readily available and is generally a more reliable source, particularly for small counties like the ones that are in the service area. While more current data is available from the U.S. Bureau of Economic Analysis, personal income data from this source is not considered to be as reliable because income levels of groups atypical of the resident population may cause a longer term high or low per capita personal income that is not indicative of the economic well-being of the area (BEA 2014). For example, a major construction project could substantially raise the per capita personal income of an area for several years because it attracts highly paid workers whose incomes are measured at the construction site instead of their county of residence.

Table 3.10-4 shows the change in estimated median household income for the VA BHHCS service area between 2000 and 2010. The entire service area had large increases in median household income, with the most significant increase of 56.1 percent in the three counties in Wyoming. Fall

River County had both the lowest median income (\$29,631 and \$35,833) and the smallest increase at 20.9 percent. Although there were individual counties in the three states with lower median incomes than Fall River County, the average by data groupings for Other South Dakota, Nebraska, and Wyoming counties was higher.

**Table 3.10-4. Median Household Income in VA BHHCS Service Area.**

Counties in VA BHHCS Service Area	Median Household Income		Change 2000–2010
	2000	2010	
Fall River, South Dakota	\$29,631	\$35,833	20.9%
Pennington, South Dakota	\$37,485	\$46,849	25.0%
Other South Dakota	\$30,943	\$42,645	37.8%
Nebraska	\$30,690	\$38,403	25.1%
Wyoming	\$31,667	\$49,440	56.1%
Total <sup>1</sup>	\$32,083	\$42,634	32.9%

\* Median household income for Hot Springs was \$31,536 in 2010.

<sup>1</sup> Represents the average of the median household incomes.

Source: Census 2010.

VA BHHCS contracts for health care professionals, including physician staffing services (locum tenens) and other support personnel on an as-needed basis to augment VA staff. These contract or fee-based positions amounted to approximately \$678,000 for FY 2014 (VA 2015b). VA BHHCS also purchases care for Veterans from non-VA providers, which amounted to approximately \$25.9 million in FY 2011 (VA 2012).

### **3.10.2.5 Labor Force and Employment Characteristics**

The U.S. Bureau of Labor Statistics defines the labor force as civilians (not active duty military or institutionalized persons) 16 years and older who are employed, seeking employment, or unemployed and available to work. Table 3.10-5 shows the number of persons who were employed compared to the size of the labor force in the VA BHHCS service from 2010 through 2014. The total labor force in the service area fluctuated slightly between 2010 (181,978) and 2013 (182,322) and then dropped to 178,422 in 2014. The trend in the number of persons employed tracked with the total labor force. Employment increased each year from 2010 to 2013, and then in 2014 the number of persons employed (171,496) dropped below the 2010 level (172,336). This would not be unexpected since the labor force in 2014 was also smaller than it was in 2010. While the overall change to the total labor force in the service area from 2010 to 2014 (181,978 to 178,422) decreased by 2.0 percent, the number of persons employed only decreased by 0.5 percent. Only the three Wyoming counties in the service area experienced both an increase in their total labor force (9.5 percent) and employment (12.2 percent) over the past five years. Although the total labor force decreased in Pennington County (0.7 percent) and the Nebraska counties (0.3 percent) between 2010 and 2014, the number of persons employed increased by 1.2 percent.

For the City of Hot Springs, the total labor force dropped slightly between 2010 and 2014, from 1685 to 1649, with a peak high of 1764 in 2011, while the total number of workers employed rose slightly during this period from 1539 in 2010 to 1608 in 2014. This resulted in a 4.4% decline in the labor force between 2010 and 2014 (compared to 20.7% decline in Fall River County); and a 4.4% increase in total number employed (compared to a 20% decline in Fall River County) (Census 2016).

However, note that comparisons to Fall River County may not be entirely accurate since the employment data are from two different sources. BLS data are not available at the community level.

Table 3.10-6 shows the number of unemployed persons in the VA BHHCS service area along with the unemployment rate from 2010 to 2014. All county groupings within the service area had sizeable decreases in the number of unemployed persons, along with improvements (decreases) in the unemployment rate. The Nebraska and Wyoming counties had the largest decreases in unemployed persons at 30.8 and 33.1 percent, respectively, while the service area counties in South Dakota had decreases between approximately 21 to 36 percent. The largest decrease in the unemployment rate from 2010 to 2014 was in the Wyoming counties with a decrease of 2.3 percentage points from 6.0 to 3.7 percent. Pennington County was next with a decrease of 1.8 percentage points from 5.2 to 3.4 percent. The Nebraska counties had the lowest unemployment rate in the service area over the past five years from 4.8 percent down to 3.3 percent. The unemployment rate in Fall River County and the other South Dakota counties improved by 0.9 and 1.0 percentage points, respectively. For comparison purposes, the 2014 statewide unemployment rates for South Dakota, Nebraska, and Wyoming were 3.4, 4.3, and 3.3 percent, respectively (SD DLR 2015b; NE DOL 2015; WY LMI 2015).

The unemployment rate for the City of Hot Springs was at 8.7% in 2010, slightly higher than the 5.5% in Fall River County. However, unemployment had dropped to 2.1% in Hot Springs in 2014, compared to an unemployment rate of 4.6% for Fall River County. This 6.6% drop in the unemployment rate equated to a nearly 80% drop in the number of unemployed workers (from 146 in 2010 to 35 in 2014) (Census 2016). However, note that comparisons to Fall River County may not be entirely accurate since the unemployment data are from two different sources. BLS data are not available at the community level.

Table 3.10-7 provides overview information on the different employment sectors, establishments, employees, and average and total wages for Fall River County and Pennington County for 2014.

**Table 3.10-5. Labor Force and Employment in VA BHHCS Service Area, 2014.**

Counties in VA BHHCS Service Area	Total Labor Force (Total) and Persons Employed (Empl)										Change 2010–2014	
	2010		2011		2012		2013		2014			
	Total	Empl	Total	Empl	Total	Empl	Total	Empl	Total	Empl	Total	Empl
Fall River, South Dakota	3,815	3,607	3,741	3,548	3,677	3,499	3,632	3,473	3,026	2,886	-20.7%	-20.0%
Pennington, South Dakota	54,063	51,251	54,881	52,299	54,783	52,451	55,056	52,946	53,691	51,878	-0.7%	+1.2%
Other South Dakota	74,330	70,180	73,427	69,274	72,887	68,972	72,710	69,057	71,295	68,022	-4.1%	-3.1%
Nebraska	41,500	39,527	42,082	40,265	42,391	40,694	42,741	41,086	41,358	39,992	-0.3%	+1.2%
Wyoming	8,270	7,771	8,188	7,741	8,320	7,914	8,183	7,830	9,052	8,718	+9.5%	+12.2%
Total	181,978	172,336,	182,319	173,127	182,058	173,530	182,322	174,392	178,422	171,496	-2.0%	-0.5%

Source: BLS 2015.

**Table 3.10-6. Unemployment and Unemployment Rate in VA BHHCS Service Area.**

Counties in VA BHHCS Service Area	Persons Unemployed (Unempl) and Unemployment Rate (Rate)										Change 2010-2014	
	2010		2011		2012		2013		2014			
	Unempl	Rate	Unempl	Rate	Unempl	Rate	Unempl	Rate	Unempl	Rate	Unempl	Rate
Fall River, South Dakota	208	5.5%	193	5.2%	178	4.8%	159	4.4%	140	4.6%	-32.7%	-0.9%
Pennington, South Dakota	2,812	5.2%	2,582	4.7%	2,332	4.3%	2,110	3.8%	1,813	3.4%	-35.5%	-1.8%
Other South Dakota	4,150	5.6%	4,153	5.7%	3,915	5.4%	3,653	5.0%	3,273	4.6%	-21.1%	-1.0%
Nebraska	1,973	4.8%	1,817	4.3%	1,697	4.0%	1,655	3.9%	1,366	3.3%	-30.8%	-1.5%
Wyoming	499	6.0%	447	5.5%	406	4.9%	353	4.3%	334	3.7%	-33.1%	-2.3%
Total	9,650	5.3%	9,437	5.2%	8,793	4.8%	8,171	4.5%	7,242	4.1%	-25.0%	-1.2%

Source: BLS 2015.



**Table 3.10-7. Employment Sectors and Wages, Fall River County (FRC) and Pennington County (PC).**

Employment Sector	Establishments		Employees		Average Wage		Total Wages	
	FRC	PC	FRC	PC	FRC	PC	FRC	PC
Industry (total private ownership)	250	4,377	1,351	47,680	\$25,794	\$36,765	\$34,847,153	\$1,752,947,009
Natural resources/mining	12	33	53	146	\$41,348	\$33,639	\$2,191,442	\$4,911,288
Construction	26	516	81	3,635	\$27,181	\$42,577	\$2,201,630	\$154,766,796
Manufacturing	8	138	15	2,639	\$31,563	\$43,119	\$473,443	\$113,791,333
Trade/transportation/utilities	49	1,027	278	11,888	\$25,847	\$33,452	\$7,185,466	\$397,676,287
Information	4	83	25	875	\$48,866	\$42,188	\$1,221,640	\$36,914,837
Financial activities	24	471	60	3,755	\$36,733	\$43,944	\$2,203,968	\$165,008,811
Professional/business services	40	824	83	4,628	\$32,133	\$49,758	\$2,667,018	\$230,281,192
Education/health services	24	437	323	9,651	\$34,243	\$47,313	\$11,060,351	\$456,622,256
Leisure/hospitality services	45	511	385	8,376	\$12,759	\$15,961	\$4,912,241	\$133,687,185
Other services	18	337	49	2,089	\$14,897	\$28,381	\$729,954	\$59,287,024
Government	44	136	1,040	7,761	\$40,238	\$43,285	\$41,847,893	\$335,932,253
<b>Total (Government and Industry)</b>	<b>294</b>	<b>4,513</b>	<b>2,391</b>	<b>55,441</b>	<b>\$32,077</b>	<b>\$37,678</b>	<b>\$76,695,046</b>	<b>\$2,088,879,262</b>

Source: SD DLR 2015c.

Only these two counties within the VA BHHCS service area are listed because they are the counties where the proposed reconfiguration would occur. The information in the table is intended to provide an overview of employment sector information, and the reader should note that the data are not inclusive of all workers because of how data are collected from and reported for private industry, government, self-employed, and religious and non-profit organizations.

As shown in Table 3.10-7, private industry in Fall River County employed approximately one-third more persons (1,351) than did the government (local, state, and federal) sector (1,040), yet accounted for approximately \$7 million less in total wages (\$34.8 to \$41.8 million) in 2014. The highest average wage in Fall River County was in the natural resources/mining sector (\$41,348) and the lowest was in the leisure/hospitality sector (\$12,759). The construction sector was very small with only 81 employees earning an average wage of \$27,181. The education/health services sector was larger with 24 establishments supporting 323 employees earning an average wage of \$34,243.

As shown in Table 3.10-7, private industry in Pennington County employed significantly more persons (47,680) than did the government sector (7,761) and accounted for approximately five times the total wages (\$1.75 billion to \$333.9 million) in 2014. The highest average wage in Pennington County was in the professional/business services sector (\$49,758) with the lowest in the leisure/hospitality sector (\$15,961). The construction sector had 3,635 employees earning an average wage of \$42,577. The education/health services sector had 437 establishments supporting 9,651 employees earning an average wage of \$47,313.

### 3.10.2.6 VA BHHCS Employment

VA BHHCS employed 1,103 people (1,021 full-time and 82 part-time) in FY 2014 (VA 2015b). This equates to 1,069 full-time equivalent employees (FTEEs) assigned to the VA facilities in Hot Springs (357 FTEEs), Rapid City (30 FTEEs), and Fort Meade (682 FTEEs). One FTEE represents either one full-time employee working 40 hours per week, or two or more part-time employees whose combined working hours total to 40 hours per week. Table 3.10-8 shows the location assignment of the FTEEs for FY 2014 by the county of residence of the employees associated with those FTEEs. Fall River County and Pennington County are listed separately because they are the counties where the proposed reconfiguration would occur. The “Other” counties include the remaining counties within the VA BHHCS service area and others outside the service area.

**Table 3.10-8. VA BHHCS FTEEs by VA Facility and Employee County of Residence.**

FTEE County of Residence	Hot Springs Campus	Rapid City CBOC	Fort Meade Campus	Total
Fall River	266	0	6	272
Pennington	39	26	149	214
Other	52	4	527	583
Total	357	30	682	1,069

Source: VA 2015b.

Table 3.10-9 shows the estimated total wages earned by VA BHHCS employees for FY 2014. The wages are listed by VA facility and county of residence of the FTEEs earning the wages at that facility. The average total wage for VA BHHCS FTE within the total area is nearly \$66,000 and the average total wage for a VA BHHCS FTE working at the Hot Springs Campus and residing in Fall

River County is just over \$61,500. This compares to a median income in Fall River County \$43,239 in 2014 (Census 2016).

**Table 3.10-9. VA BHHCS Estimated Total Wages by VA Facility and FTEE County of Residence**

<b>FTE County of Residence</b>	<b>Hot Springs Campus</b>	<b>Rapid City CBOC</b>	<b>Fort Meade Campus</b>	<b>Total</b>
Fall River	\$16,377,677	\$0	\$406,248	\$16,783,925
Pennington	\$2,401,238	\$2,020,316	\$10,088,504	\$14,510,058
Other	\$3,201,651	\$310,818	\$35,682,157	\$39,194,626
Total	\$21,980,566	\$2,331,135	\$46,176,909	\$70,488,609

Source: VA 2015b.

## 3.11 Community Services

Community services are provided by public and non-profit agencies and organizations to support and enhance the community with educational, protective, medical, and recreational services. These services include local community hospitals and clinics, fire/rescue and emergency medical services, law enforcement, local schools, and parks and recreation facilities.

### 3.11.1 Regulatory and Policy Framework

Legislation, regulations, and plans govern local government responsibilities for providing community services. No state or local requirements related to community services apply to VA.

VA acts as its own building and fire protection official and “authority having jurisdiction”. As such, VA reviews fire code requirements during the design and construction phases of a project. VA may also conduct an evaluation of the emergency response services (including local fire departments) available to facility operations. Construction and operation of a dedicated VA fire department are included in project plans when required to support VA medical facilities operating 24 hours a day in communities where fire response is provided by volunteers instead of full-time, 24-hour fire response staff. A support agreement or mutual aid agreement may be prepared to document shared fire response services. A police and security unit is staffed 24 hours a day at VA facilities operating 24 hours a day to provide physical security and monitor law enforcement activities for the protection of persons and VA property. VA Handbook 0730 *Security and Law Enforcement* (VA 2014) requires the establishment of a support agreement with local law enforcement agencies.

### 3.11.2 Current Conditions

Figures 3.11-1 and 3.11-2 identify the locations of the community services in the Hot Springs and Rapid City areas described in the following subsections.

#### 3.11.2.1 Hospitals and Clinics

In the VA BHHCS service area, there are 3 tertiary care hospitals, 18 critical access hospitals, 5 Indian Health Services hospitals, 3 Indian Health Services health care centers, and numerous primary care clinics.

##### 3.11.2.1.1 Hot Springs and Fall River County

The VA Hot Springs hospital and clinic serve Veterans predominately from the VA BHHCS service area. Services provided at the VA Hot Springs Campus include primary care, urgent care, pharmacy services, outpatient surgery, inpatient care (10 beds), dialysis, x-ray and mobile imaging, specialty care, laboratory services, mental health, and a call center. There are also seven beds for long-term care in a Community Living Center (nursing home) and 100 beds for the RRTP that serves homeless Veterans and provides mental health services for post-traumatic stress, substance abuse, alcohol abuse, and other conditions.

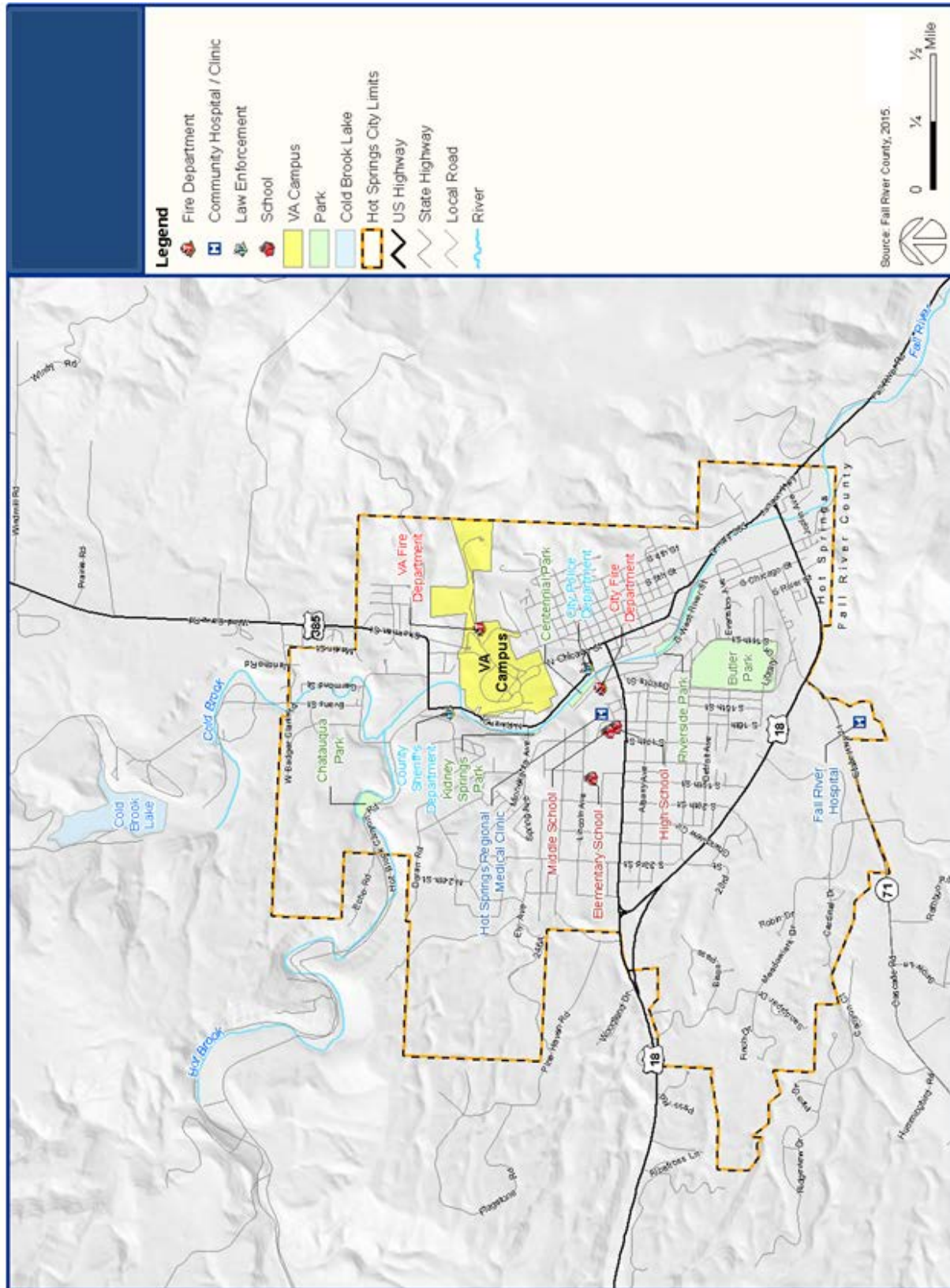


Figure 3.11-1. Hot Springs Community Services.





Fall River Health Services operates the Fall River Hospital, Rural Health Clinic, and Seven Sisters Living Center in Hot Springs. The hospital is designated by the U.S. Department of Health and Human Services as a critical access hospital. The hospital has 25 inpatient beds and provides services for acute (urgent) and emergency care, laboratory, medical imaging, ultrasound, physical therapy and rehabilitation, surgery, orthopedics, podiatry, and sleep studies. Fall River Hospital employs two physicians and two nurse practitioners; contracts four emergency medicine physicians and four outreach specialty physicians; and has additional nursing, patient care, and service and facility support staff (Fall River Health Services 2013).

Hot Springs Regional Medical Clinic operates Monday through Friday from 9:00 a.m. to 4:00 p.m. It offers family and internal medicine services and specialties in audiology, counseling, endocrinology, nephrology, urology, and surgical practices.

### **3.11.2.1.2 Rapid City and Pennington County**

The VA CBOC in Rapid City serves Veterans primarily from the Rapid City area. The facility provides primary care, specialty care, and compensated work therapy.

Rapid City Regional Hospital is an urban hospital serving the communities in Pennington County and the Black Hills region. The hospital has an inpatient capacity of 329 beds and provides specialty medical, surgical, and intensive care (tertiary) services. Rapid City Regional Hospital is one of the three tertiary hospitals in the VA BHHCS service area; the other two are located in Pierre and Scottsbluff.

## **3.11.2.2 Fire/Rescue and Emergency Medical Services**

### **3.11.2.2.1 Hot Springs and Fall River County**

There are nine volunteer fire department (VFD) response areas in Fall River County, of which Hot Springs is one. Hot Springs Volunteer VFD has over 30 volunteers, of which approximately 20 are active firefighters providing fire suppression within and surrounding the city (G. Hanson, personal communication, July 29, 2015). The City of Hot Springs provided approximately \$85,000 from the general (tax) fund for fire department operations (Hot Springs 2013). The fire station is located on Garden Street, approximately one mile south of the VA Hot Springs Campus.

Wildland fire suppression in Fall River County is provided by VFDs, the State of South Dakota, and the U.S. Forest Service. Because local fire departments are staffed by volunteers, the status and response capability to wildland fires may vary. Hot Springs is considered a “community at risk” due to the moderate level of wildland fire susceptibility (BLM 2004) and because of the size of and structures within the wildland-urban interface surrounding the city (Fall River County 2014).

VA BHHCS Fire Department (FD) is a federally funded department that provides fire response services for VA facilities in Hot Springs and Fort Meade. The fire department on the VA Hot Springs Campus is staffed 24 hours a day with a total staffing level of 13 firefighters who operate two fire engines and one brush truck. A mutual aid agreement was executed between the VA Hot Springs FD and the Hot Springs VFD in June 1998 to provide firefighting assistance (personnel and apparatus) to one another (VA 1998). Requests for assistance are infrequent. VA Hot Springs FD is rarely called to provide assistance to the Hot Springs VFD; there have been approximately two to three calls over the past couple of years (J. Henderson, email message to M. Peters, June 26, 2015).

Although there is no written mutual aid agreement with another federal agency for wildland firefighting assistance, the VA Hot Springs FD would provide appropriate assistance to the Forest Service if requested. VA Hot Springs FD and medical center do not provide ambulance transport for emergency medical response, although the urgent care clinic accepts ambulance transport vehicles.

Hot Springs Ambulance Service provides basic and advanced life support service throughout Fall River and Custer Counties using volunteer and paid personnel (emergency medical technicians and paramedics) from Hot Springs and surrounding communities.

#### **3.11.2.2.2 Rapid City and Pennington County**

The Rapid City FD is a paid professional department providing fire suppression and prevention and incident response 24 hours a day from seven fire stations located throughout Rapid City. The department has 142 employees, including 119 firefighters (RCFD 2015). The Emergency Medical Service Division of the Rapid City FD provides basic and advanced life support ambulance service for Rapid City and throughout Pennington County, and frequently responds into neighboring counties as well. Approximately one-third of the firefighters are paramedics with the others certified as emergency medical technicians. The Rapid City FD responded to 15,422 calls during 2014, of which 75 percent were emergency medical or rescue related (RCFD 2015). The Rapid City FD budget for 2015 is approximately \$12.9 million dollars, of which approximately 75 percent is general (tax) funds and 25 percent enterprise (non-tax) funds (Rapid City 2015).

Pennington County Volunteer Fire Service consists of over 450 volunteers belonging to 20 individual VFDs throughout the county providing fire suppression and emergency medical response. These VFDs operate under a mutual aid agreement among the VFDs, the Rapid City FD, and Ellsworth Air Force Base's FD.

#### **3.11.2.3 Law Enforcement Services**

##### **3.11.2.3.1 Hot Springs and Fall River County**

VA BHHCS maintains a police and security unit to provide law enforcement and security services for the safety and well-being of patients, staff, and visitors at VA facilities. VA Hot Springs Police Department (PD) is staffed by 10 police officers and a supervisor with a minimum of two officers patrolling the VA Hot Springs Campus 24 hours a day. The police officers provide security patrols of the facilities, parking lots, and living quarters, and respond to reported suspicious or criminal activity, vehicle activity, and personal property losses on the campus. Although the campus is federal property, VA Hot Springs PD has a support agreement with the local, state, and federal law enforcement agencies having jurisdiction over the area for assistance, as needed, with law enforcement situations.

Police protection and law enforcement within the City of Hot Springs is provided by the Hot Springs PD with a staff of 10 people (Hot Springs 2015). The City of Hot Springs provided approximately \$577,000 from the general (tax) fund for police department operations (Hot Springs 2013). The area surrounding the city (outside the corporate limits) is served by the Fall River County Sheriff's Office with a staff of 19 people (R. Evans, personal communication, December 12, 2014). Both law enforcement agencies provide assistance to the VA Hot Springs PD in the event of an emergency or if requested in accordance to the terms of the support agreement.



### 3.11.2.3.2 Rapid City and Pennington County

Rapid City PD provides law enforcement patrol and investigative and forensic services for the city and surrounding suburban areas. Rapid City PD has a staff of 153 employees and operates on a budget of approximately \$13.6 million from general (tax) funds (Rapid City 2015). The Pennington County Sheriff's Office is co-located in the same station as the Rapid City PD. The Sheriff's Office has 372 employees and 221 volunteers with an annual budget of approximately \$28 million (Pennington County 2014).

The VA CBOC in Rapid City is not a 24-hour operation and therefore does not require 24-hour protection by a VA police and security unit. VA police from the Fort Meade campus monitor alarms and other law enforcement actions at the CBOC, with assistance from the Rapid City PD in accordance with the terms of a written support agreement. Rapid City PD responds to calls or alarms at the CBOC that require an immediate response.

### 3.11.2.4 Schools

#### 3.11.2.4.1 Hot Springs and Fall River County

There are three public school districts in Fall River County serving pre-kindergarten through grade 12: Hot Springs, Edgemont, and Oelrichs. Hot Springs School District covers part of Custer County. There is one private elementary school in Hot Springs serving pre-kindergarten through grade 5. School enrollment and expenditure by student for the past five school years are shown in Table 3.11-1.

**Table 3.11-1. Enrollment and Expenditure per Student, Fall River County School Districts.**

School District	School Year Ending					Change 2010–2014
	2014	2013	2012	2011	2010	
<b><i>Enrollment<sup>1</sup></i></b>						
Hot Springs	802	798	813	810	840	-1.1%
Edgemont	163	170	169	153	150	+2.3%
Oelrichs	123	115	125	123	126	-0.5%
<b><i>Expenditure per Student<sup>1</sup></i></b>						
Hot Springs	\$7,559	\$8,599	\$7,291	\$7,891	\$6,186	+6.5%
Edgemont	\$11,312	\$11,592	\$11,600	\$11,680	\$9,542	+4.8%
Oelrichs	\$16,019	\$17,821	\$15,264	\$18,082	\$14,419	+4.1%

<sup>1</sup> Kindergarten through grade 12.

Source: SDDOE 2015a.

Student enrollment has decreased slightly in Hot Springs and Oelrichs and has increased in Edgemont, while expenditure per student has increased at the three school districts. Expenditures per student for the 2014 school year for Hot Springs, Edgemont, and Oelrichs ranked 115, 24, and 4, respectively, out of the 151 districts in the state (SDDOE 2015b).

Student-to-staff ratios vary by school and from one school year to another. The State of South Dakota Department of Education creates a model district profile based on enrollments and averages for the model district profile. Table 3.11-2 shows the student-to-staff ratio at the Fall River County school districts for the past five school years compared to the state model district average. Hot Springs School District historically operates at a student-to-staff ratio comparable to other school

districts throughout the state with similar student enrollment, whereas Edgemont and Oelrichs historically have had better ratios compared to similarly situated school districts.

**Table 3.11-2. Student-to-Staff Ratio, Fall River County School Districts.**

School District	School Year Ending					State Average <sup>1</sup>
	2014	2013	2012	2011	2010	
Hot Springs	13.7	13.3	14.6	13.1	14.2	14.1
Edgemont	8.8	9.2	9.5	9.3	10.3	11.3
Oelrichs	8.7	7.5	8.8	6.9	6.5	11.3

<sup>1</sup> School year ending 2014.

Source: SDDOE 2015a.

School district revenue is from local, county, state, and federal sources. The majority of revenue is from local and state sources, with the local sources predominantly from property and sales taxes. There are over 60 other sources of school revenue, such as utility taxes, bank franchise taxes, fines, investment income, and payments in lieu of taxes. A school district's revenue is augmented based on enrollment; number of English proficiency, special needs, and free/reduced lunch eligible students; and if the district is in a sparsely populated area. Table 3.11-3 shows the revenue and expenditure for the Fall River County school districts for the past five school years. Hot Springs and Oelrichs have experienced slight decreases in both revenue and expenditure, whereas Edgemont has experienced increases.

**Table 3.11-3. Revenue and Expenditure, Fall River County School Districts.**

School District	School Year Ending					Change 2010–2014
	2014	2013	2012	2011	2010	
<b>Revenue<sup>1</sup></b>						
Hot Springs	\$7,216,608	\$7,132,873	\$7,195,607	\$7,477,682	\$7,248,351	-0.1%
Edgemont	\$2,243,334	\$2,277,875	\$2,143,916	\$2,179,328	\$2,047,434	+2.4%
Oelrichs	\$1,551,557	\$1,654,053	\$1,585,342	\$1,661,987	\$1,574,098	-0.2%
<b>Expenditure<sup>1</sup></b>						
Hot Springs	\$7,056,672	\$7,692,006	\$6,851,147	\$7,827,951	\$7,410,216	-0.7%
Edgemont	\$2,849,552	\$2,209,797	\$2,046,652	\$2,066,355	\$1,893,636	+11.3%
Oelrichs	\$2,059,353	\$1,972,087	\$2,055,241	\$2,129,296	\$2,087,621	-0.3%

<sup>1</sup> Includes general, capital outlay, special education, and pension funds from local, county, state, and federal sources.

Source: SDDOE 2015a.

### 3.11.2.4.2 Rapid City

There are six public school districts located entirely or partially in Pennington County: Rapid City, Douglas, New Underwood, Wall, Hill City, and Custer. For purposes of this EIS, only the Rapid City School District is described.

School enrollment and expenditure by student for the past five school years for the Rapid City School District are shown in Table 3.11-4. Enrollment has increased slightly while expenditure per student has increased more. Expenditure per student for the 2014 school year for Rapid City ranked 111 out of the 151 districts in the state (SDDOE 2015b).



**Table 3.11-4. Enrollment and Expenditure per Student, Rapid City School District.**

School District	School Year Ending					Change 2010–2014
	2014	2013	2012	2011	2010	
<i>Enrollment<sup>1</sup></i>						
Rapid City	13,702	13,898	13,506	13,280	13,126	+1.1%
<i>Expenditure per Student<sup>1</sup></i>						
Rapid City	\$7,611	\$7,188	\$7,302	\$7,565	\$5,778	+7.9%

<sup>1</sup> Kindergarten through grade 12.

Source: SDDOE 2015a.

Table 3.11-5 shows the student-to-staff ratio at the Rapid City public schools for the past five school years compared to the state model district average. Rapid City School District historically operates at a student-to-staff ratio comparable to other school districts throughout the state with similar student enrollment.

**Table 3.11-5. Student-to-Staff Ratio, Rapid City School District.**

School District	School Year Ending					State Average <sup>1</sup>
	2014	2013	2012	2011	2010	
Rapid City	15.4	16.1	15.6	15.2	16.2	15.5

<sup>1</sup> School year ending 2014.

Source: SDDOE 2015a.

Table 3.11-6 shows the revenue and expenditure for the Rapid City School District for the past five school years. Rapid City has experienced minor increases in both revenue and expenditure.

**Table 3.11-6. Revenue and Expenditures, Rapid City School District.**

School District	School Year Ending					Change 2010–2014
	2014	2013	2012	2011	2010	
<b>Revenue<sup>1</sup></b>						
Rapid City	\$118,372,970	\$120,052,644	\$119,888,704	\$121,909,594	\$117,489,528	+0.8%
<b>Expenditure<sup>1</sup></b>						
Rapid City	\$121,742,480	\$134,674,624	\$154,233,665	\$136,078,716	\$110,443,034	+3.6%

<sup>1</sup> Includes general, capital outlay, special education, and pension funds from local, county, state, and federal sources.

Source: SDDOE 2015a.

### **3.11.2.5 Parks and Recreation**

Recreational resources near the VA Hot Springs Campus include local, state, and national parks. The City of Hot Springs maintains a number of public parks and amenities for various recreational and community events, including golfing, playgrounds, trails, sports, picnicking, swimming, organized events, and relaxing. City parks include Upper Chautauqua, Lower Chautauqua, Brookside, Butler, Centennial, and Cold Brook. Cold Brook Lake and Angostura Reservoir provide fishing, boating, and camping options. Evans Plunge, fed by the natural hot springs, is an enclosed pool offering year-round swimming, hot tubs, and a steam room. Fall River is a major recreational asset through the center of the city with the Freedom Trail system and parks along the river.

Custer State Park is approximately 20 miles north of Hot Springs. Encompassing 71,000 acres within the Black Hills, the park is known for its granite peaks and buffalo herds, and provides wildlife viewing areas, scenic drives, fishing, educational programs, trails, and resort services.

Wind Cave National Park is approximately six miles north of Hot Springs. Encompassing approximately 33,000 acres, the park offers trails, camping opportunities, and tours through one of the longest caves in the world.

The Rapid City Parks and Recreation Department maintains parks, open space, bicycling and walking trails, recreation facilities, and golf courses throughout the community. Rapid City has approximately 22 acres of parks, open space, and public grounds per 1,000 people, which exceeds the national standard of 10 acres (Rapid City 2014). The department manages approximately 1,650 acres of parkland, with some of the more notable being Dinosaur Park (a historic site), Skyline Wilderness Area, Memorial Park, and Storybook Island.

## 3.12 Solid Waste and Hazardous Materials

Hazardous material is defined (49 CFR 171.8) as a substance or material that has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce. The term includes “hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions” in 49 CFR Part 173. Transportation of hazardous materials is regulated by the U.S. Department of Transportation (49 CFR Parts 105–180).

Hazardous materials can also be defined as any substance with special characteristics that poses a health or safety hazard to people, plants, or animals when released. Specific types of solid and hazardous materials identified and evaluated in this EIS include:

- Solid (municipal) waste – Solid material discarded by a community, including excess food, containers and packaging, residential garden wastes, other household discards, and light industrial debris (Lindeburg 2001).
- Asbestos-containing materials – Used in many building materials prior to 1989, including floor tiles, textured ceilings, heating pipe insulation, and structural fire protection insulation.
- Lead-based paint – Used in building paints prior to 1978.
- Polychlorinated biphenyls (PCBs) – Includes dielectric fluids, heat-transfer fluids, and hydraulic fluids. Although no longer manufactured in the U.S., PCBs remain in products still in use and in contaminated media from spills and previously contacted surfaces.
- Hazardous waste – Specific wastes regulated by the *Resource Conservation and Recovery Act* (RCRA), including characteristic wastes (wastes exhibiting ignitable, corrosive, reactive, or toxic properties) and listed wastes (specifically identified process and chemical wastes).
- Regulated medical waste – Includes disposable equipment, instruments, utensils, human tissue, laboratory waste, blood specimens, or other substances that could carry pathogenic organisms.
- Hazardous materials stored in aboveground storage tanks (ASTs) and underground storage tanks (USTs).

### 3.12.1 Regulatory Framework

#### 3.12.1.1 Federal Requirements

The *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) (commonly known as Superfund), enacted in 1980, provides a federal mechanism for cleaning up uncontrolled or abandoned hazardous waste sites as well as accidents, spills, and other emergency releases of pollutants. CERCLA imposes a tax on hazardous substances to create a fund (Superfund) so that EPA can clean up abandoned sites when potentially responsible parties cannot be identified or located, or when potentially responsible parties fail to act (IHMM 2002). Releases of hazardous

substances to the environment in excess of reportable quantities are required to be reported to the National Response Center.

In 1986, the *Superfund Amendments and Reauthorization Act* (SARA) reauthorized CERCLA to continue cleanup activities around the country (IHMM 2002). Title III of this reauthorization act expanded chemical reporting requirements and is also known as the *Emergency Planning and Community Right-to-Know Act*. Title III also required each state to appoint a state emergency response commission, which in turn divided states into emergency planning districts managed by a local emergency planning committee. Chemical use reports are made available to the public to aid in emergency planning and community awareness.

The *Toxic Substances Control Act* of 1976 provides a means to test, regulate, and screen all chemicals produced in or imported into the U.S. The Act has special provisions for the regulation of PCBs, asbestos, radon, lead-based paint, and dioxins (IHMM 2002).

Enacted in 1976, RCRA gave EPA the authority to regulate hazardous waste from “cradle-to-grave,” which includes the generation, transport, treatment, storage, and disposal of hazardous waste (IHMM 2002). RCRA also provides a framework for managing nonhazardous solid wastes. The law set forth an intent to promote conservation of resources through reduced reliance on landfilling (ACHMM 2000). In South Dakota, RCRA is administered by the SDDENR.

The 1984 amendments to RCRA, known as the *Hazardous and Solid Waste Amendments*, required that land disposal of hazardous waste be phased out (IHMM 2002). The amendments also increased EPA’s enforcement authority, provided more stringent hazardous waste management standards, and created a comprehensive UST program.

Through the 1975 *Hazardous Materials Transportation Act* and its regulations in 49 CFR, the U.S. Department of Transportation has authority over the safe transportation of hazardous materials. The regulation covers hazardous materials classification, hazard communication, packaging requirements, operational rules, and training (IHMM 2002).

Under the *Pollution Prevention Act* of 1990, preventing or reducing waste generation where it originates was made the national environmental policy of the U.S. The Act’s purpose was to focus attention on reducing pollution through changes in production, operation, and hazardous material selection.

The *Atomic Energy Act* of 1954 governs the use, possession, and disposal of source, special nuclear, and byproduct materials for civilian and military uses (IHMM 2002). Medical facilities that may use nuclear materials for medical imaging or research purposes are subject to the regulations of the Act.

### **3.12.1.2 South Dakota Requirements**

South Dakota Codified Laws define infectious and medical wastes and govern the unlawful release of infectious wastes to the environment (SDCL 34A-6). Facilities that generate infectious and medical wastes are subject to these laws. SDDENR also regulates the management of solid wastes (as defined in SDCL 34A-6-1.3(17), including municipal garbage, tires, yard waste, construction and demolition debris, contaminated soil, and sludge), hazardous wastes (as defined in SDCL 34A-11-2(4), as they apply to generators and transporters of hazardous waste, used oil, and universal waste), and asbestos abatement (as described in SDCL 34-44, including the removal, storage, and handling of asbestos containing construction, renovation, and demolition debris).

### **3.12.1.3 Department of Veterans Affairs Guidance**

Several VA directives and handbooks provide guidance for the management of solid and hazardous materials and waste, including:

- VA Directive 0057, VA Environmental Management Program (January 15, 2010) – establishes environmental policies within VA.
- VA Directive 0059 and VA Handbook 0059, VA Chemicals Management and Pollution Prevention (May 25, 2012) – prescribes the goals, policies, roles and responsibilities, and major requirements for chemicals management within VA, including reducing or eliminating the quantity of hazardous chemicals and materials acquired, generated, used, or disposed to the extent possible. The guidance also requires development of a chemical management and pollution prevention plan.
- VA Directive 0062 and VA Handbook 0062, Environmental Compliance Management (January 10, 2012) – prescribes the goals, policies, roles and responsibilities, and major requirements for environmental compliance management and reporting within VA, including continual improvement of environmental compliance and optimization through robust environmental management systems.
- VA Directive 0063 and VA Handbook 0063, Waste Prevention and Recycling Program (October 17, 2011) – establishes waste prevention and recycling program policy within VA, promoting source reduction as the most important approach for meeting waste prevention and recycling goals.

## **3.12.2 Current Conditions**

### **3.12.2.1 Solid Waste**

Solid waste is routinely generated through operations at the Hot Springs Campus. In FY 2013, the Hot Springs Campus generated 274,530 pounds (137.3 tons) of solid waste (VA 2014a). Corrugated cardboard is compacted onsite; solid waste is collected and transferred by a third party and disposed at the Custer Fall River Regional Landfill (see Figure 3.12-1). The Custer Fall River Regional Landfill (currently managed by Barker Concrete & Construction, Inc.) is a Type IIB municipal landfill that covers 280 acres and is permitted to receive up to 25,000 tons per year of solid waste (SDDENR 2014a), including authorization to receive construction and demolition waste. The landfill accepted approximately 18,000 tons of solid waste in 2013, and ample landfill capacity remains as two additional cells will be constructed in the coming months and a subsequent phase of expansion is planned (Barker 2014).

Solid waste is also routinely generated through operations at the Rapid City CBOC. The Rapid City CBOC is located in a leased facility, and thus the FY 2013 solid waste generation amount is unknown. The solid waste is collected and transferred by a third party and disposed at the Rapid City Landfill (see Figure 3.12-2). The Rapid City Landfill covers 451 acres and is permitted to receive up to 200,000 tons per year of solid waste (SDDENR 2014b), including authorization to receive construction and demolition waste. The landfill accepted approximately 17,000 tons of solid waste from over 18,000 accounts in 2011 (Rapid City 2011). The Rapid City CBOC operations are an insignificant contributor to the overall solid waste intake at the Rapid City Landfill.





Figure 3.12-1. Hot Springs Area Solid Waste Landfills.

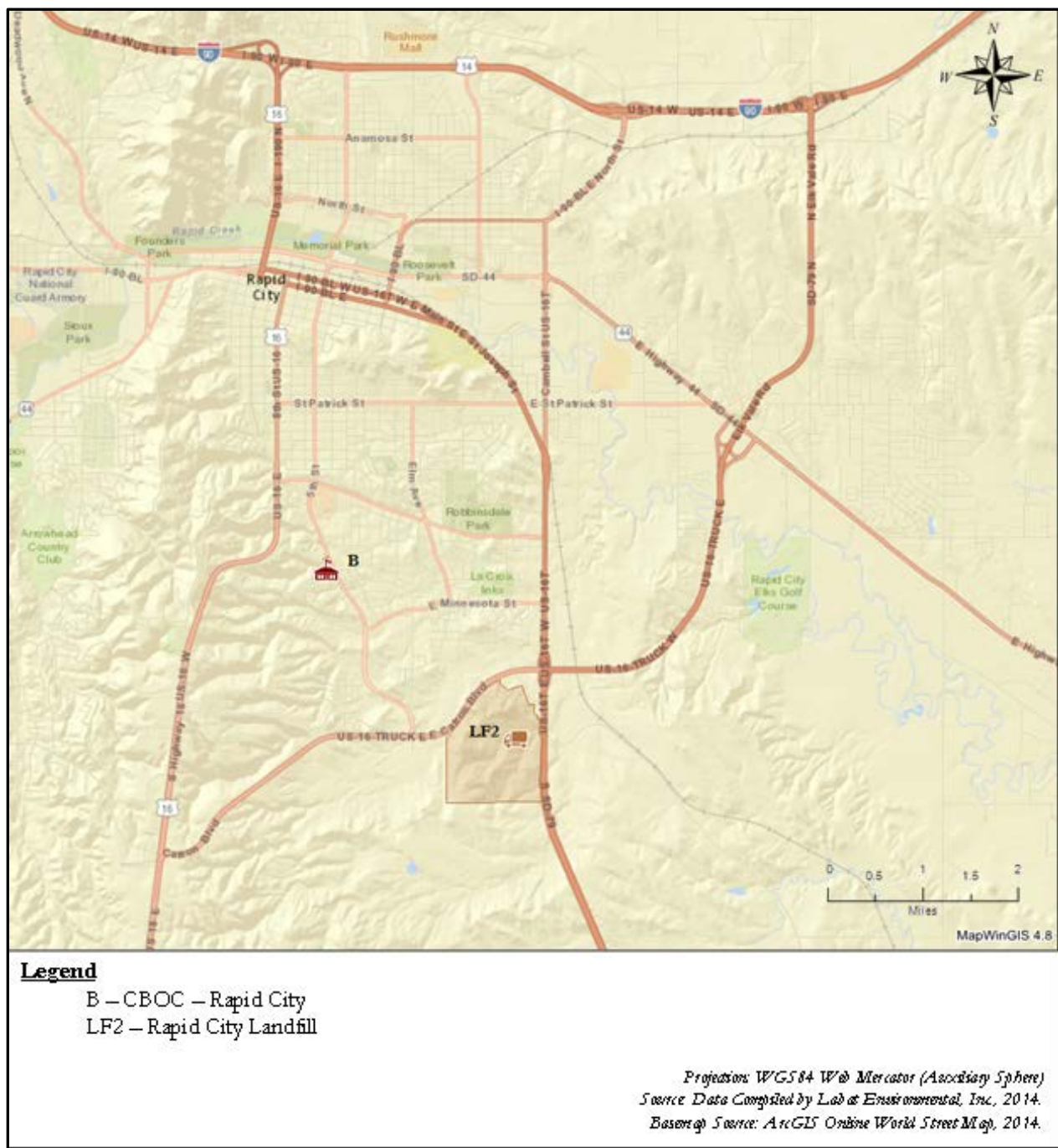


Figure 3.12-2. Rapid City Area Solid Waste Landfills.

### **3.12.2.2 Medical Waste**

Medical waste is routinely generated through operations at both the Hot Springs Campus and the Rapid City CBOC. Medical waste is collected by a third party and transferred to Stericycle in Dacono, CO, where wastes are treated for ultimate disposal. In FY 2013, the Hot Springs Campus generated 12,754 pounds of medical waste and the Rapid City CBOC generated 806 pounds of medical waste (VA 2014a).

### **3.12.2.3 Hazardous Waste**

The Hot Springs Campus is classified as a RCRA Conditionally Exempt Small Quantity Generator (CESQG) of hazardous waste (EPA 2014a). CESQGs generate 100 kilograms (220 pounds) per month or less of hazardous waste or 1 kilogram (2.2 pounds) per month or less of acutely hazardous waste. Additionally, CESQGs may not accumulate more than 1,000 kilograms (2,200 pounds) of hazardous waste at any time. During FY 2014, the Hot Springs Campus generated 603 pounds of hazardous waste, including 4 pounds of acutely hazardous waste (VA 2014b). All generated hazardous waste is contracted for transportation and disposal at authorized facilities.

Hazardous waste generated at the Rapid City CBOC is managed through the Fort Meade campus (a small quantity generator of hazardous waste) (EPA 2014b). Rapid City CBOC operations contribute a small fraction of the hazardous waste generated and managed by the Fort Meade campus.

### **3.12.2.4 Hazardous Materials**

Hazardous materials stored and used in VA BHHCS operations (including operations at the Hot Springs Campus and the Rapid City CBOC) are tracked using a chemical inventory tracking system developed by the VA Center for Engineering and Occupational Safety and Health. Management of hazardous materials within VA is outlined in VA Directive 0059, *VA Chemicals Management and Pollution Prevention* (VA 2012).

The Hot Springs Campus stores some hazardous materials in ASTs; no USTs are present at the site. Three ASTs (39,590 gallons each) store #2 diesel fuel oil for site heating purposes. Twelve additional ASTs (ranging from 40 gallons to 2,000 gallons) store #1 and #2 diesel fuel, gasoline, hydraulic oil, cylinder oil, and compressor oil. ASTs at the site are located within secondary containment and are managed in accordance with the site Spill Prevention, Control, and Countermeasures Plan. Rapid City CBOC operations do not utilize any ASTs or USTs.

Radioactive materials are used in medical operations within the VA BHHCS. The BHHCS radioactive material management program effectively tracks and manages radioactive sources while onsite, where they naturally decay and are eventually disposed in accordance with solid waste regulations.

### **3.12.2.5 Building Materials**

Many uses of asbestos-containing materials were phased out or banned in a series of federal regulations from 1973 to 1990. Lead-based paint was used in many structures built or repainted before 1978. Due to the age of the facilities at the Hot Springs Campus, asbestos-containing materials and lead-based paint are present in facility building materials. The VA BHHCS Industrial Hygiene group maintains an inventory of facilities where asbestos-containing materials and lead-

based paint are present. These materials are not known or expected to be present at the Rapid City CBOC, as the facility was constructed in 1995.

No PCB-containing equipment is known to be located at either the Hot Springs Campus or the Rapid City CBOC.

### ***3.12.2.6 Legacy Environmental Issues***

No known legacy environmental issues presently exist at either the Hot Springs Campus or the Rapid City CBOC. Underground storage tanks at the Hot Springs Campus were removed more than 15 years ago, and subsequent groundwater monitoring was completed without identifying residual contamination. USTs have been removed from the site and closed. Previous releases of hazardous materials have been mitigated, and no further action determinations have been received. No other legacy landfills or chemical waste disposal areas on the Hot Springs Campus site were identified (EDR 2016).



## 3.13 Transportation and Traffic

Transportation and traffic are defined by the physical attributes and functionality of the roadway network within the VA BHHCS service area, along with the available modes of travel that are available within the service area. A segment of a roadway network is commonly referred to as a transportation facility.

### 3.13.1 Regulatory and Policy Framework

#### 3.13.1.1 South Dakota

The Statewide Long Range Transportation Plan prepared by the South Dakota Department of Transportation provides an overview of the transportation network and trends in the state, and outlines actions to address these trends and develop solutions to transportation problems (SDDOT 2010). The plan guides annual decision-making for the Statewide Transportation Improvement Program, which is a five-year list of transportation projects scheduled for completion. State and federal funding for transportation improvement projects is based on these two plans.

#### 3.13.1.2 Pennington County and Rapid City Area

The transportation goal established by the Pennington County Comprehensive Plan is to achieve a safe, efficient, and convenient transportation network that is coordinated with existing land use and future planned growth throughout the county (Pennington County 2003). Pennington County coordinates with municipal governments in the development of the regional transportation system and facility improvements.

Transportation planning in the Rapid City area is conducted by the Rapid City Area Metropolitan Planning Organization (MPO). The MPO includes the cities of Rapid City, Box Elder, Summerset, and Piedmont; Ellsworth Air Force Base; unincorporated areas of Black Hawk; and developing areas of Pennington and Meade Counties. The long range transportation plan for the Rapid City area is called *RapidTRIP 2035* (MPO 2010). The MPO is in the process of updating the plan to 2040. The plan identifies specific services and projects for different modes of travel that will be necessary to meet the transportation needs of the Rapid City area through 2040, once updated. The different modes of travel addressed in the plan include auto, transit, non-motorized (bicycle and pedestrian), and, to a lesser extent aviation, rail, and freight.

The MPO prepared the *2013-2017 Coordinated Public Transit-Human Services Transportation Plan* (MPO 2013) to identify strategies to improve transportation and access to services, health care, and employment for seniors, persons with disabilities, and individuals with low incomes. Some of the strategies to improve transportation services include expanding the transit service times, days, and destinations; adding *Americans with Disabilities Act* accessible bus stops; sharing resources among agencies; and increasing outreach to transit users.

The MPO prepared the *Rapid City Area Bicycle and Pedestrian Master Plan* (MPO 2011) to guide the development of a network of bicycle and pedestrian routes that link activity centers within Rapid City and provide opportunities for connections to surrounding areas. The plan calls for including appropriate bicycle and pedestrian access in design criteria for roadway construction projects.



The Rapid City Comprehensive Plan (Rapid City 2014) goals and policies pertaining to transportation include synchronizing the transportation network with land use needs, and expanding public transit service by enhancing bus stops, improving safety and functionality for elderly or disabled residents, and expanding transit service hours and connectivity between key community destinations.

### **3.13.1.3 Fall River County and Hot Springs Area**

Fall River County does not have a transportation plan.

The Hot Springs Comprehensive Plan (Hot Springs n.d.) goals specific to transportation include:

- Provide for adequate road capacity to serve both current and future needs as new development occurs.
- Evaluate street improvement standards to encourage designs that will serve to reduce adverse effects on adjacent and abutting land uses.
- Improve signage along the main traffic corridors, indicating distance and direction to shopping and parking areas and areas of special interest.
- Improve north-south traffic flow along North River Street (through the lower town area).
- Provide financial resources for improvements and adequate maintenance of existing roads.
- Establish a street grade ordinance for new streets to avoid future problems.
- Institute a program to ensure that all main collector streets be resurfaced with durable all-weather hard-surfaced finish through the use of assessment districts or a bond issue.
- Require private developers to install curb and gutter and sidewalks during new development in major renovation areas.
- Monitor high accident intersections in Hot Springs and develop effective measures to reduce accidents in these areas.

### **3.13.2 Current Conditions**

Roadways are classified by function based on the type of service the road provides for the traveling public. Road functions fall generally within four broad classifications, which are further defined by transportation planning agencies to reflect local conditions, such as in rural or urban areas. The road functional classifications in the VA BHHCS service area include:

- Principal (major) arterials: Divided, limited access facilities that serve higher traffic volumes and longer distance trips, connect major traffic generators, and are primarily interstates, freeways, or expressways. In rural areas, principal arterials also include two-lane, undivided highways with no access controls, and are primarily U.S. highways or major state highways.
- Minor arterials: Collect and distribute traffic from principal arterials to lower classified streets in urban areas, or link rural communities.
- Collectors: Provide traffic circulation and land access between urban residential and commercial areas, or serve intra-county travel in rural areas.

- Local roads: Provide lowest level of mobility and highest level of access to adjacent land; traffic speed is relatively slow.

### **3.13.2.1 VA BHHCS Service Area**

The principal arterials crossing east-west through the VA BHHCS service area include Interstate 90 (I-90), U.S. Highway 18 (US-18), US-20, and US-26. The principal arterials crossing north-south through the service area include US-385, US-85, and South Dakota Highway 79 (SD-79). Examples of minor arterials in the rural area include SD-36, SD-44, SD-73, Nebraska Highway 2 (NE-2), and NE-27; and examples of collectors include SD-71 and SD-471. The major roadways in the VA BHHCS region are shown in Figure 3.13-1.

Average daily traffic (ADT) counts range between approximately 5,100 and 7,300 vehicles on the rural stretches of I-90 through the VA BHHCS service area, and approximately 3,400 and 9,000 vehicles on SD-79 between Hot Springs and Rapid City (SDDOT 2014). The ADT counts on the rural stretches of other principal arterials and minor arterials range between approximately 1,500 and 3,600 vehicles, with less than 1,000 vehicles on the collector roads (SDDOT 2014; NDOR 2014; WYDOT 2013). These counts increase near and through the rural communities.

Rural public transit services are available throughout the VA BHHCS service area that are 80 percent funded by the Federal Transit Administration and operated by local governments, transportation service providers, non-profit organizations, or Indian tribes. These services are generally operated on a 24-hour advance request and some provide regularly scheduled trips to the larger communities. Fares vary based on originating location and trip destination. Some of the rural public transit providers offer free or reduced fare services for Veterans and senior citizens. The VetTrans program offered by rural transit services assists Veterans, Veterans' families, and Veteran service organizations with their transportation needs for medical appointments, employment, and daily activities.

Commercial bus transportation in the VA BHHCS service area is limited to interstate routes. Commercial air transportation is available in Pierre, Rapid City, and Scottsbluff. Commercial taxi or private shuttle services are available in most communities within the service area.

The Disabled American Veterans (DAV) organization provides transportation for Veterans to VA medical facilities. The DAV has volunteer shuttle coordinators and drivers for Rapid City, Fort Meade, and other communities in the VA BHHCS service area to arrange transportation services to local CBOCs and to the medical facilities in Hot Springs and Fort Meade. The DAV estimates that they provide 200 to 250 rides per month throughout the VA BHHCS service area (Personal communication, Don Sealock, DAV Hospital Service Coordinator for BHHCS, with A. Woodruff, 7/15/15). Transportation services are funded by donation and federal grants and are free for injured or ill Veterans.

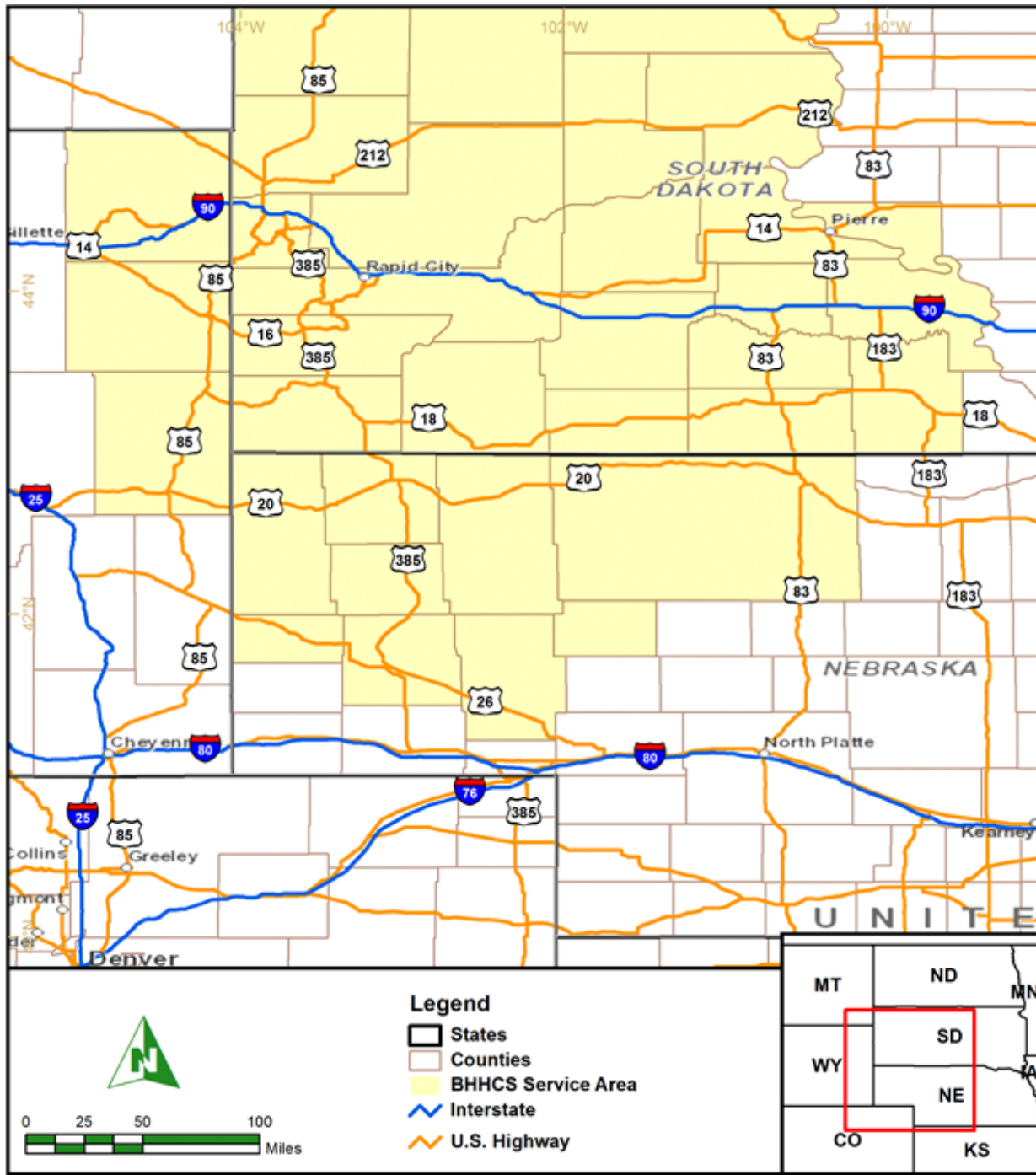


Figure 3.13-1. Major Roadways in VA BHHCS Service Area.

### 3.13.2.2 Rapid City Area

The principal arterials through Rapid City include I-90, I-190, US-16 (Mount Rushmore Road), US-16 Bypass (Elk Vale Road), and SD-44 (Jackson Boulevard and Omaha Street). Examples of minor arterials in the urban area of Rapid City include Main Street, St. Patrick Street, 5<sup>th</sup> Street, and Campbell Street. Examples of collectors include Skyline Drive and Minnesota Street.

The ADT counts on I-90 through the Rapid City area range between approximately 21,000 and 35,000 vehicles (SDDOT 2014). The ADT counts on the other principal arterials range between approximately 8,000 and 23,000 vehicles, with the highest counts between 25,000 and 30,000 vehicles in the downtown area on Omaha Street between East Boulevard and West Boulevard (MPO 2015). The ADT counts vary widely on the minor arterials and collectors based on the locations throughout the city, but generally range between 5,000 and 15,000 vehicles (MPO 2015).

According to the long-range transportation plan, *RapidTRIP 2035*, the existing roadway network handles current traffic demands quite well, with sporadic congestion problems generally occurring at intersections with deficient signalization or where the addition of turn lanes could alleviate the congested condition. The baseline traffic congestion that was used for transportation planning is shown in Figure 3.13-2.

Research and data gathering for the 2015 update of *RapidTRIP 2035* indicated that residents and employers are satisfied overall with the quality of roads and highways in the Rapid City area, including road maintenance and improvements. There was some dissatisfaction with congestion in specific locations, including Sheridan Lake Road, SD-44 from the airport, and in the vicinity of schools (BBC 2014).

Congestion during morning and evening peak hours will increase based on residential growth in the south and southwest areas of Rapid City. The transportation facility improvements through 2015 with projected 2035 traffic increases will likely result in peak hour congestion on north-south principal and minor arterials, as shown in Figure 3.13-3.



Source: MPO 2010.

Figure 3.13-2. Traffic Congestion in Rapid City.





Source: MPO 2010.

Figure 3.13-3. Future Congestion with 2015 Transportation Improvements and 2035 Traffic.

The Rapid City Area MPO adopted a future “financially constrained” roadway plan in *RapidTRIP 2035* that identified projects and studies needed to improve transportation capacity. The plan includes recommended (funded) projects, but it is financially constrained because it also includes illustrative (unfunded) projects, studies to determine feasibility of transportation improvement projects, and right-of-way preservation. Figure 3.13-4 shows this future roadway plan. Although this future roadway plan would not address all anticipated congestion with 2035 traffic, it would be expected to improve conditions in the Rapid City area, as shown in Figure 3.13-5.



Source: MPO 2010.

Figure 3.13-4. Future 2035 Financially Constrained Roadway Plan.



Source: MPO 2010.

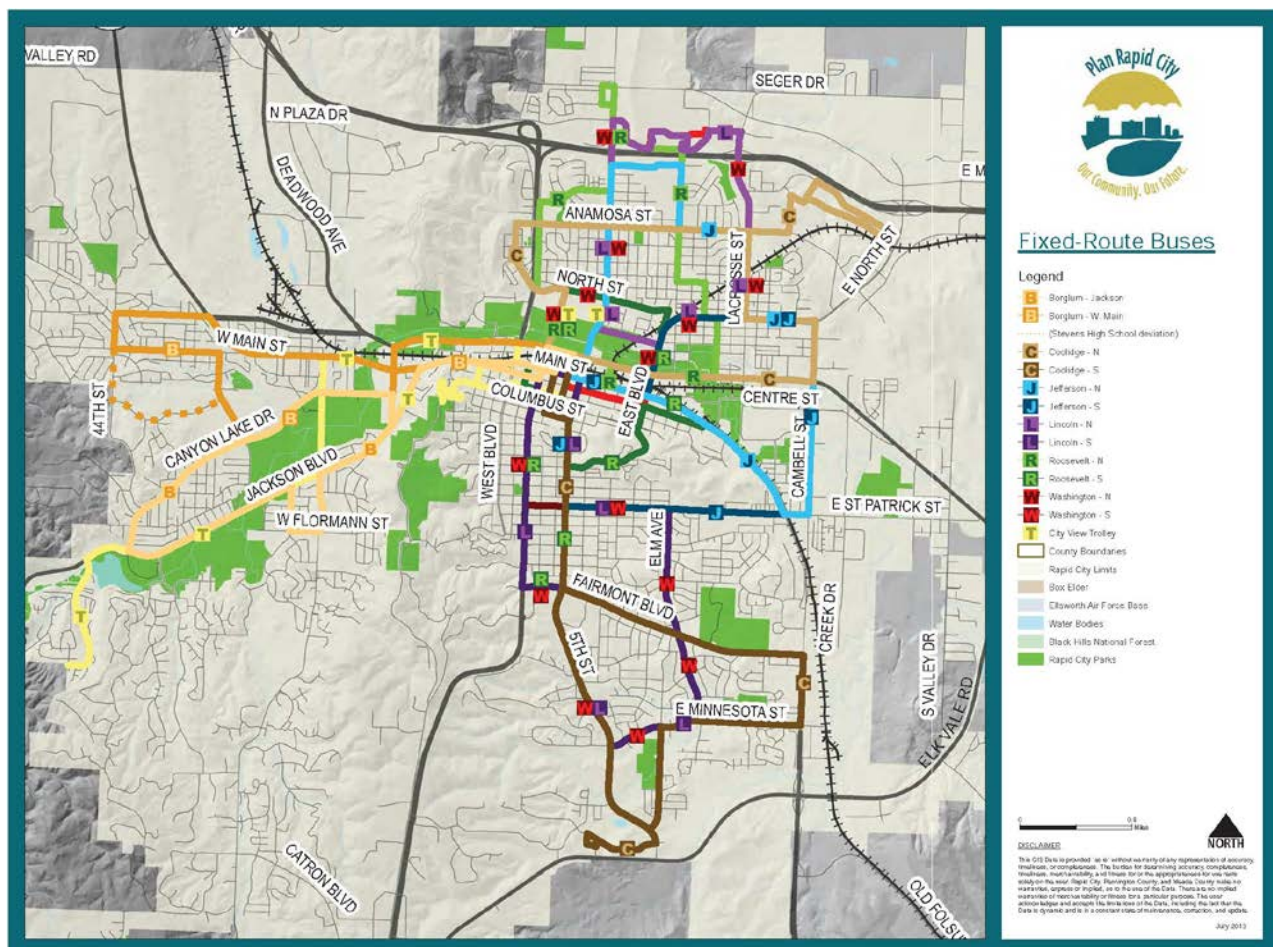
Figure 3.13-5. Future Congestion with 2035 Financially Constrained Roadway Plan.



Public transportation options in Rapid City include a fixed bus route system (RapidRide), para-transit service (Dial-A-Ride) for passengers with disabilities, and trolley service (City View Trolley) between popular tourist destinations. These services are operated by Rapid Transit System.

Dial-A-Ride provides curb-to-curb or door-to-door transportation for local residents who qualify for services under the *Americans with Disabilities Act*. The service operates within the corporate limits of Rapid City on Monday through Friday from 6:20 a.m. to 5:50 p.m. and on Saturday from 8:00 a.m. to 7:00 p.m., excluding holidays. Service must be scheduled with Rapid Transit System one day prior to the passenger's planned trip.

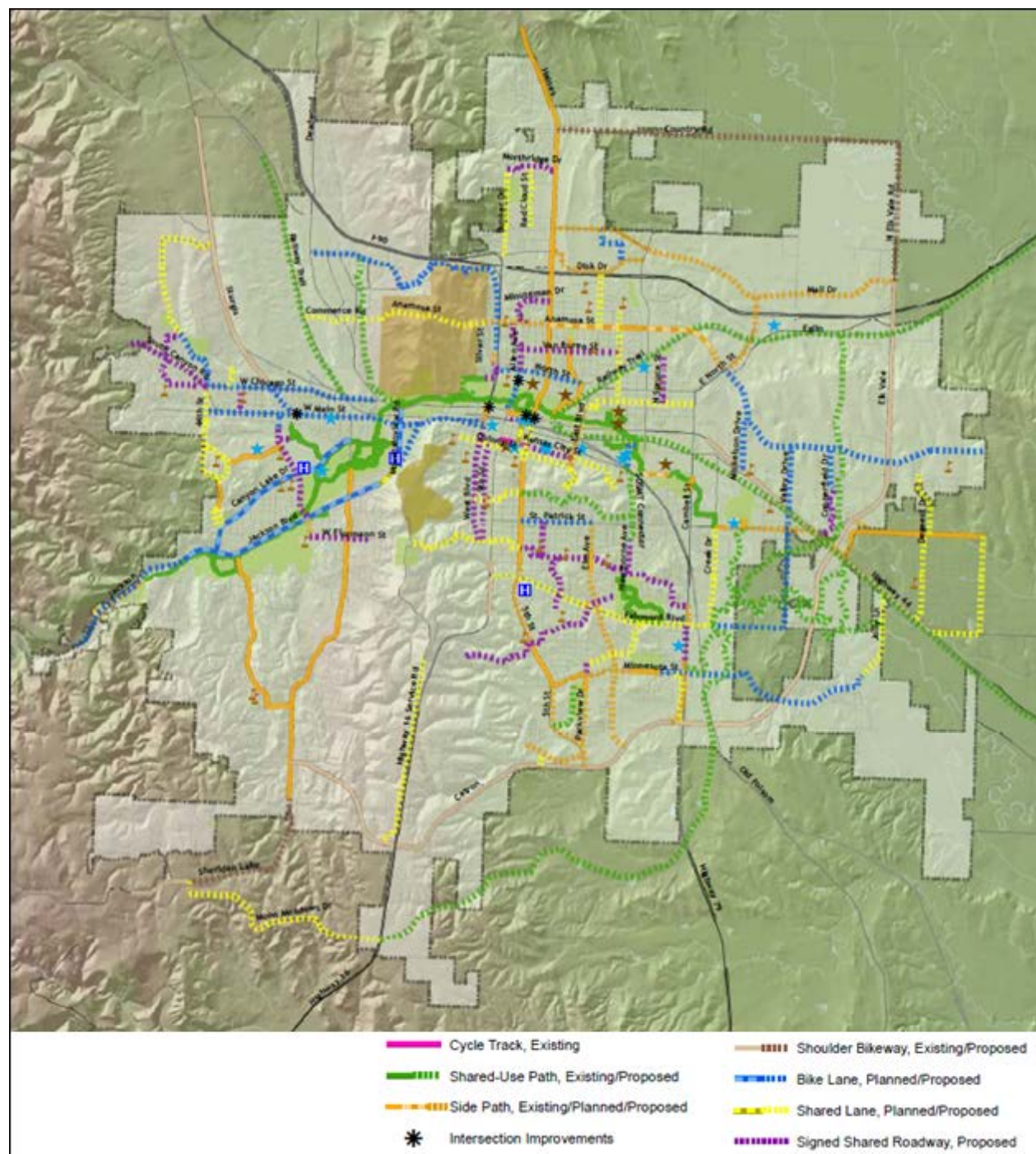
RapidRide operates year-round on six different fixed routes from the Milo Barber Transportation Center located at 333 6<sup>th</sup> Street, and on two school routes during the school year. The service operates on Monday through Friday from 6:20 a.m. to 5:50 p.m. and on Saturday from 9:50 a.m. to 4:40 p.m., excluding holidays. The route system map is shown in Figure 3.13-6.



Source: Rapid City 2014.

**Figure 3.13-6. RapidRide Bus System Route Map.**

The *Bicycle and Pedestrian Master Plan* is intended to make bicycling and walking a more viable mode of transportation in the Rapid City area. A network of on-street and off-street bicycle and pedestrian facilities will provide connections to destinations throughout the city, and will integrate with the bus network to increase the distance that can be comfortably traveled by a pedestrian or bicyclist. The locations of existing and proposed bikeways are shown in Figure 3.13-7.



Source: MPO 2011.

**Figure 3.13-7. Existing and Proposed Bikeways.**



### **3.13.2.3 Hot Springs Area**

The principal arterials through the Hot Springs area include SD-79, US-18/US-385, US-18 Bypass (Indianapolis Avenue)/US-18, US-18 (Chicago Street), and US-385 (River Street). University Avenue (US-18) is a minor arterial, and Galveston Avenue, SD-71, Argyle Road, and a short segment of 6<sup>th</sup> Street are collector roads. The remaining street network throughout Hot Springs is rural local roads.

The ADT counts on the principal arterials range from approximately 4,900 to 5,700 vehicles on the stretch of US-18/US-385 from SD-79 through Hot Springs (SDDOT 2014). The ADT counts on US-18 between Hot Springs and Edgemont range from 1,940 to 1,785 vehicles, and from 1,600 to 120 vehicles on SD-71 between Hot Springs and Ardmore at the Nebraska state line. The ADT count on US-385 north of Hot Springs is less than 1,400 vehicles.

The main travel route through Hot Springs on Chicago Street and River Street can experience congestion with additional cars, tour buses, and recreational vehicles during the peak tourist season.

Rural public transit services are available in Hot Springs and Fall River County. Prairie Hills Transit, a non-profit organization, provides public transportation within Hot Springs and service to Rapid City, Custer, and Edgemont via disability accessible vehicles. The transportation service is available Monday through Friday from 7:00 a.m. to 4:00 p.m. with a 24-hour advance request.

Bicycle and pedestrian routes in the Hot Springs area include the Freedom Trail that parallels Fall River through the city, and the George S. Mickelson Trail that crosses the western part of Fall River County.

## 3.14 Utilities

Utilities are defined as services provided to the public, often but not always distributed by community-wide infrastructure. Specific utilities identified and evaluated in this EIS include:

- Water treatment and supply
- Wastewater treatment
- Electricity supply
- Heating supply (natural gas or heating oil)
- Communications (telephone and data)

### 3.14.1 Regulatory and Policy Framework

Three *Energy Policy Acts* have been passed, which include provisions for conservation and energy development, use of alternative fuels, increased fuel economy requirements, biofuel development, and changes to indoor lighting, with grants and tax incentives for both renewable and non-renewable energy.

On March 19, 2015, the White House issued Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*. This order stated that federal agencies should prioritize reducing energy use and cost, then on finding renewable or alternative energy solutions; propose greenhouse gas emission reduction targets; beginning in FY 2016, where life-cycle cost-effective, implement measures specified in the order related to building energy use, renewable energy sourcing, water use, decreasing fleet inventories and mobile source greenhouse gas emissions, use of recycled and sustainably produced materials; advance waste prevention and pollution prevention; and promote electronics stewardship. Agencies, including VA, were previously required to develop and implement strategic sustainability performance plans (SSPPs) in accordance with Executive Order 13514, which was revoked by Executive Order 13693. VA's existing SSPP identifies sustainability goals and defines strategies for achieving these goals, consistent with VA's Sustainability Management Policy. The SSPP includes goals for sustainable buildings, water use efficiency, greenhouse gas reductions, and renewable energy usage (VA 2014). A draft 2015 SSPP is in review at this time of this publication (Email from B. Carlson, July 23, 2015).

### 3.14.2 Current Conditions

#### 3.14.2.1 Water Treatment and Supply

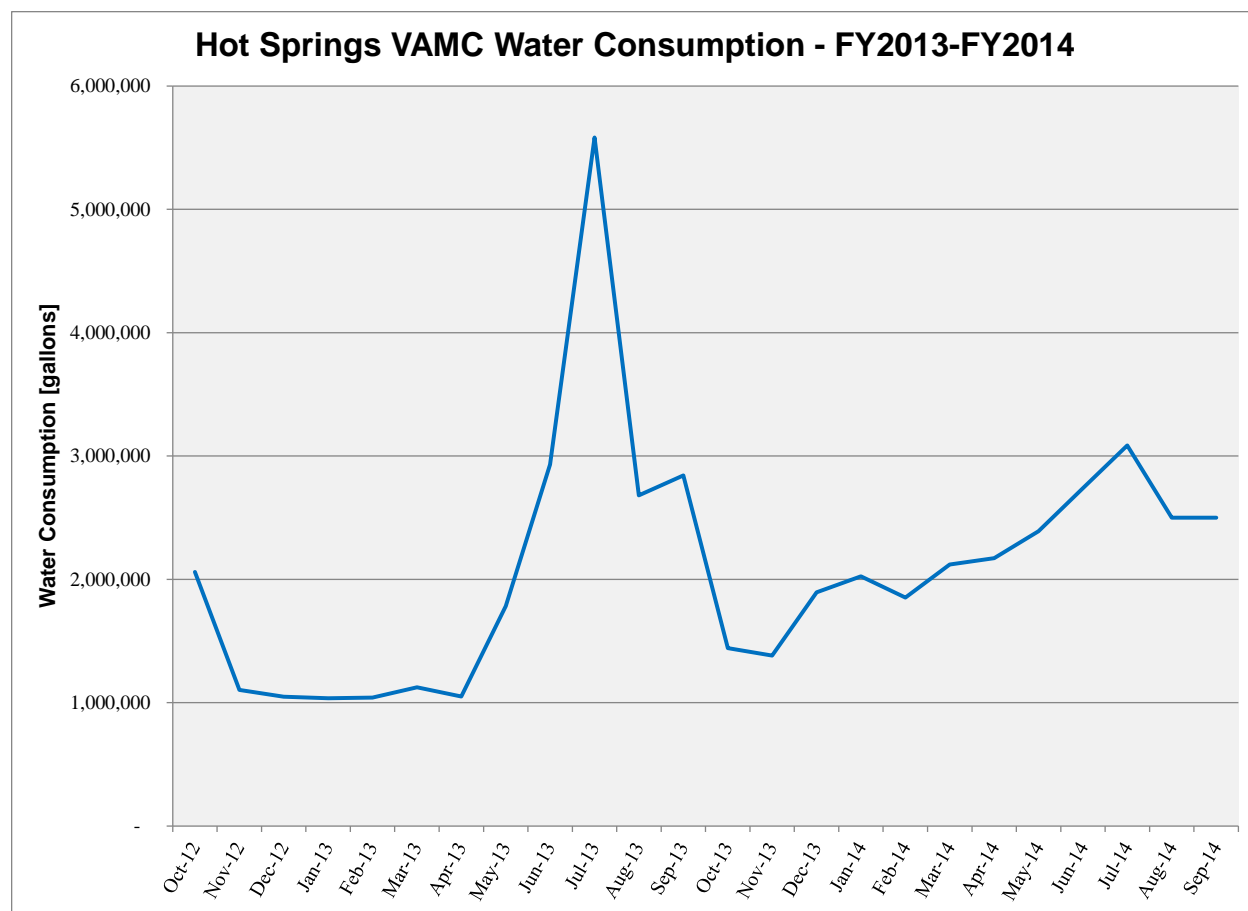
Water is supplied to the Hot Springs Campus from a natural spring located approximately one-half mile northwest of the campus. Water is diverted from the spring to a cistern located at the campus Boiler Plant (Building 18) through a buried eight-inch diameter pipe via gravity. Water is pumped from the cistern via two pumps to two water towers (980,000 gallons total capacity) through buried eight-inch and six-inch diameter pipe. Typically, one pump is operated at a time, but both pumps can be operated if necessary. Water is treated for potable use with gaseous chlorine. Water uses at the campus include potable use, heating, fire protection, and landscape irrigation. Water diverted to the cistern in excess of campus demand is discharged to Fall River.

South Dakota administers water rights under the Doctrine of Prior Appropriation, where the priority of each water right is established based on the date of filing an application (priority date) –

older rights are senior to more recent rights. VA holds two water rights licenses authorizing its use of the spring water supply. Vested Right Water License No. 2420-2 appropriates 1.56 cubic feet per second (700 gallons per minute) of water from the spring. This water right has a priority date of January 1, 1907 (SD 1999). Water License No. 2421-2 appropriates an additional 1.23 cubic feet per second (551 gallons per minute) of water from the spring. This water right has a priority date of March 17, 1999 (SD 2011).

The Hot Springs Campus is also connected to the Hot Springs municipal water system for backup supply.

The Hot Springs Campus reported a total water consumption of 24,284,000 gallons in FY 2013 and 26,103,000 gallons in FY 2014, with greater consumption during the summer months when landscape irrigation is required (VA 2015). Figure 3.14-1 depicts the monthly water consumption for the Hot Springs Campus.



**Figure 3.14-1. Hot Springs Campus Water Consumption, FY 2013 – FY 2014.**

The Rapid City CBOC is connected to the Rapid City municipal water system for water supply. Water uses at the CBOC include potable use and fire protection. The CBOC is one tenant located within a leased facility, and water consumption attributable only to CBOC operations is not available.

### 3.14.2.2 Wastewater Treatment

The Hot Springs Wastewater Treatment Plant treats wastewater generated throughout Hot Springs, including wastewater generated at the Hot Springs Campus. The treatment facility design flow is 700,000 gallons per day (EPA 2014a), and the average facility flow is 350,000 gallons per day (Bastian 2014). Treated water is discharged to Fall River. The Hot Springs City Engineer noted that concerns have been raised regarding the potential for anaerobic conditions developing in the treatment plant clarifier if average flows are significantly lower than the design flow. However, such conditions have not yet developed at the current average flow, and it is unknown at what average flow such conditions would develop (Bastian 2014).

Wastewater generation from the Hot Springs Campus is metered at two locations where wastewater is discharged to the city wastewater collection and treatment system. The Hot Springs Campus reported a total wastewater generation of approximately 13,200,000 gallons in FY 2013 and approximately 10,100,000 gallons in FY 2014 (VA 2015), or approximately nine percent of the Hot Springs Wastewater Treatment Plant average facility flow. Figure 3.14-2 depicts the monthly wastewater generation for the Hot Springs Campus.

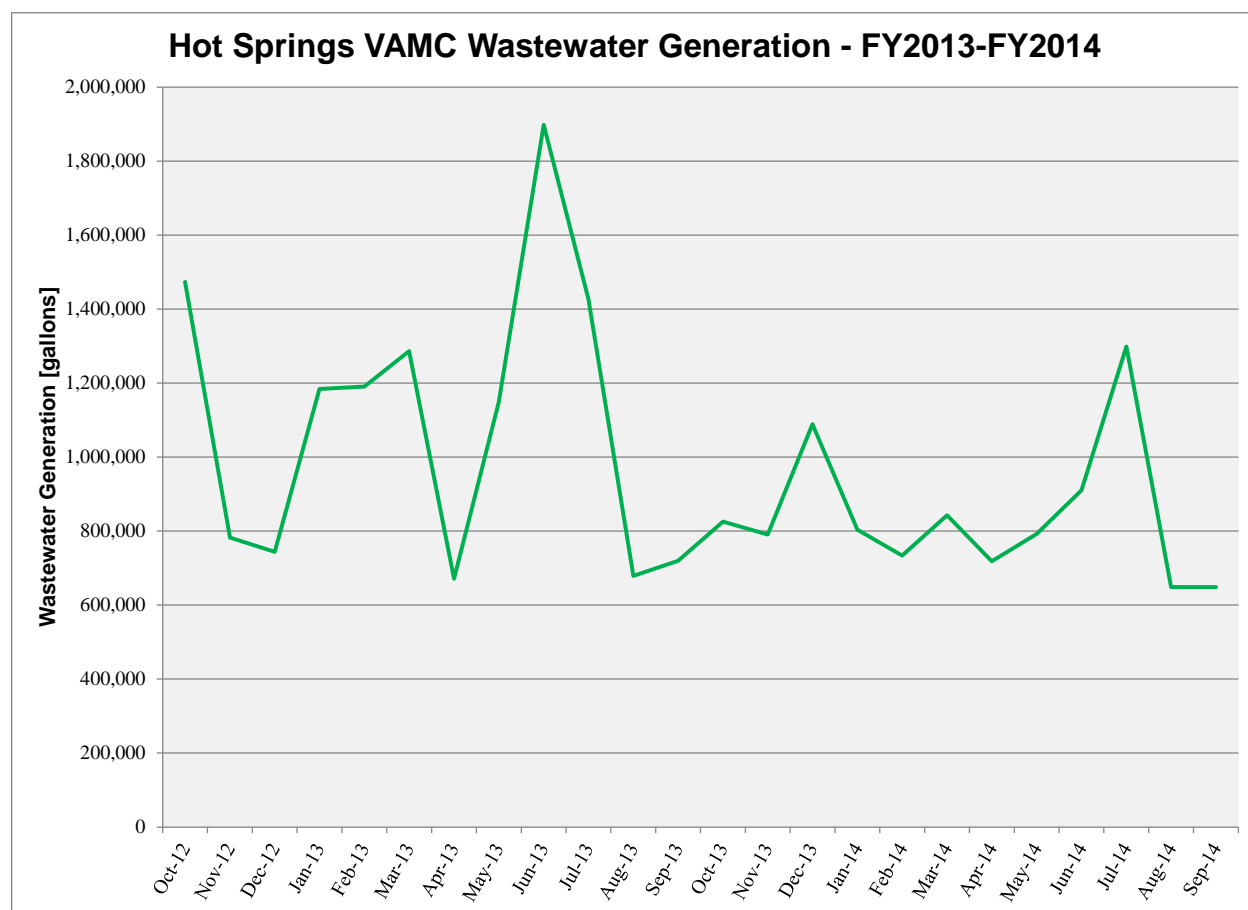


Figure 3.14-2. Hot Springs Campus Wastewater Generation, FY 2013 – FY 2014.

According to the City of Hot Springs, flow reductions from the campus to the wastewater treatment plant in recent years has affected wastewater revenue for the city, which dropped 36% between 2007 (\$41,340) and 2014 (\$26,470), despite a 15% rate increase over that period (City of Hot Springs 2015).

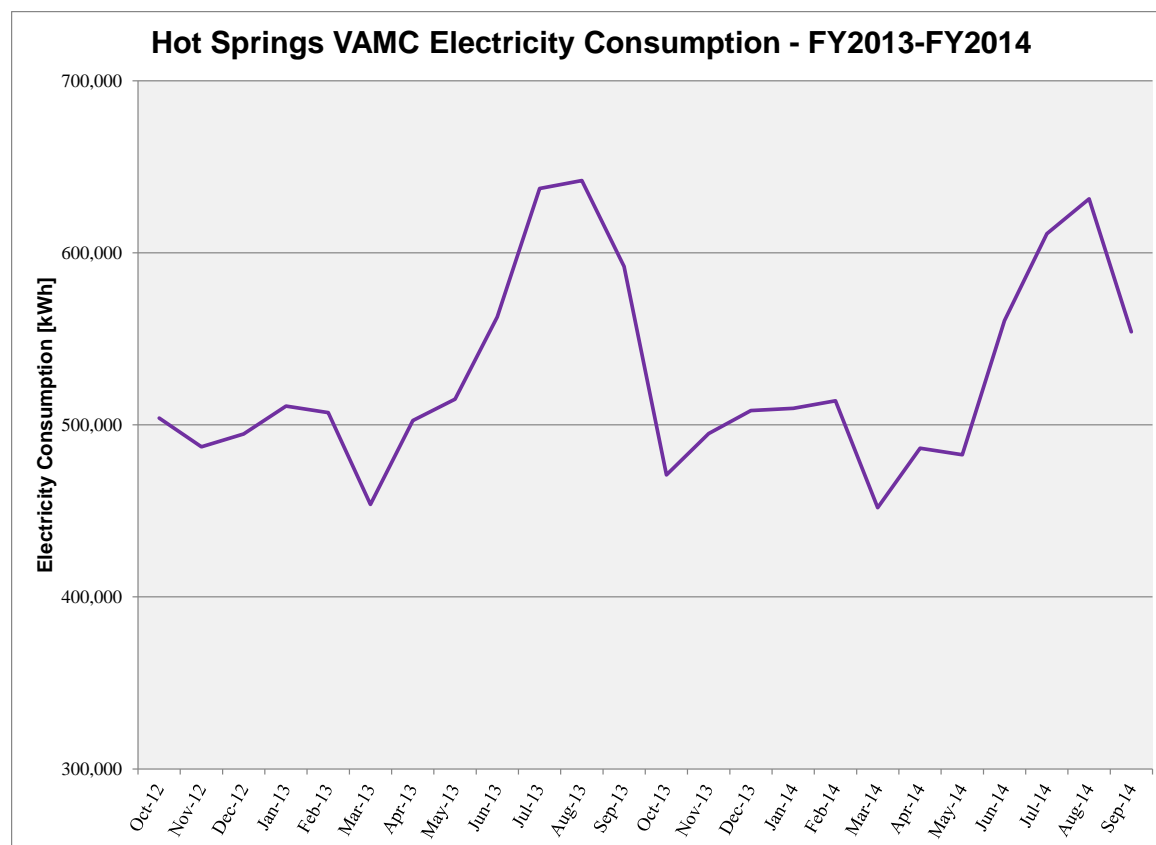
The Rapid City Wastewater Treatment Plant treats wastewater generated throughout Rapid City, including wastewater generated at the Rapid City CBOC. The treatment facility processed 3.5 billion gallons of wastewater in 2011 (averaging 9.6 million gallons per day from over 20,000 accounts) (Rapid City 2011). Treated water is discharged to Rapid Creek (EPA 2014b). The Rapid City CBOC is one tenant located within a leased facility, and wastewater generation attributable only to CBOC operations is not available. However, the Rapid City CBOC operations are an insignificant contributor to the overall wastewater inflow at the Rapid City Wastewater Treatment Plant.

### ***3.14.2.3 Electricity Supply***

Electricity service at both the Hot Springs Campus and the Rapid City CBOC is provided by Black Hills Power, a subsidiary of Black Hills Corporation. Black Hills Power provides electricity service to nearly 70,000 customers in 20 different communities throughout western South Dakota, northern Wyoming, and southeastern Montana (BHP 2014a). Black Hills Power has full or partial ownership in 11 power generating facilities in the region (BHP 2014b).

The Hot Springs Campus consumed 6,409,513 kilowatt-hours in FY 2013 and 6,275,920 kilowatt-hours in FY 2014 (VA 2015). The operational square footage of the Hot Springs Campus is 464,000 square feet, meaning the average annual electricity consumption for the facility was 13.8 kilowatt-hours per square foot. This electricity consumption rate is similar to the electricity consumption rate of 13.2 kilowatt-hours per square foot for all buildings in the Midwest census region (EIA 2003). Figure 3.14-3 depicts the monthly electricity consumption for the Hot Springs Campus.





**Figure 3.14-3. Hot Springs Campus Electricity Consumption, FY 2013 – FY 2014.**

The Rapid City CBOC is one tenant located within a leased facility, and electricity consumption attributable only to CBOC operations is not available.

#### **3.14.2.4 Heating Supply**

The Hot Springs Campus operates three 500-horsepower steam boilers to provide facility heating. The boilers utilize #2 fuel oil supplied by Harm's Oil in Aberdeen, SD. Fuel oil is stored in three 39,590-gallon ASTs. The Hot Springs Campus consumed 397,444 gallons of #2 fuel oil for steam generation in FY 2013 and 438,765 gallons in FY 2014 (VA 2015). Figure 3.14-4 depicts the monthly fuel oil consumption for the Hot Springs Campus. The majority of facilities and residences in Hot Springs use either electricity or propane for heating purposes (City-Data 2014a).

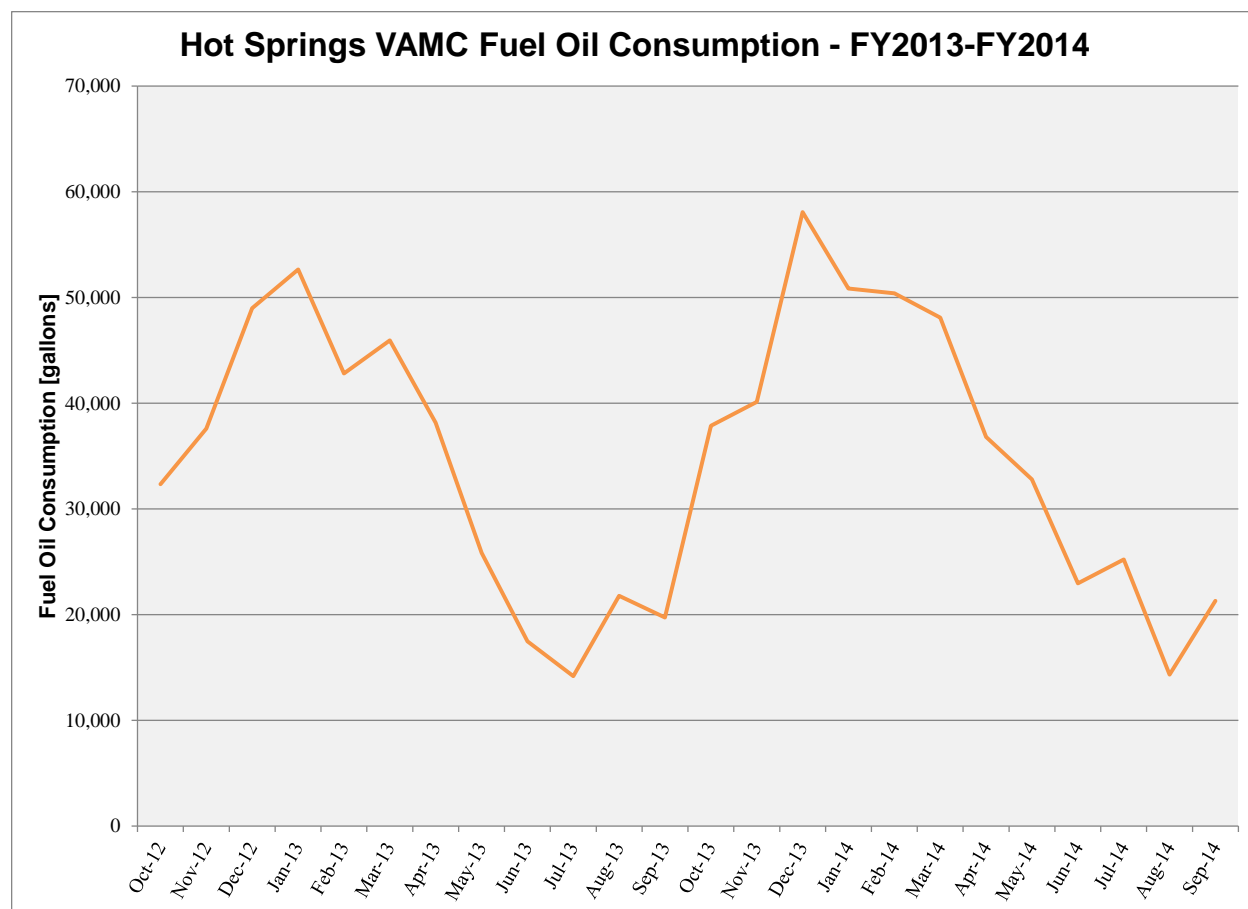


Figure 3.14-4. Hot Springs Campus Fuel Oil Consumption, FY 2013 – FY 2014.

The Rapid City CBOC is one tenant located within a leased facility, and natural gas consumption for heating purposes attributable only to CBOC operations is not available. The majority of facilities and residences in Rapid City use natural gas for heating purposes (City-Data 2014b), supplied by Montana-Dakota Utilities Company.

### 3.14.2.5 Communications

The Hot Springs Campus currently receives telephone, television, and internet service from Golden West Telecommunications. Golden West Telecommunications provides services to much of the southwestern South Dakota area, including Hot Springs. Communications services are available throughout the area.

As the Rapid City area is a larger metropolitan area than the Hot Springs area, a greater number of telephone, television, and internet providers service the area, allowing consumers a choice in service providers. Communications services are available throughout the area.

## 3.15 Environmental Justice

Environmental justice applies to potential adverse environmental impacts disproportionately borne by minority or low income populations. Environmental justice includes protection from health and safety risks if the potential for such risks are driven by an environmental impact. Related to environmental justice is any disproportionate risk to children, regardless of minority or income status, from environmental health and safety impacts.

### 3.15.1 Regulatory and Policy Framework

#### 3.15.1.1 *Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*

Executive Order 12898 requires each federal agency identify and address, as appropriate, the disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. These provisions also apply fully to programs involving Native Americans. The executive order is also intended to promote nondiscrimination in federal programs, policies, and activities that affect human health and the environment, and to provide minority and low-income communities with access to public information and public participation.

#### 3.15.1.2 *Council on Environmental Quality Guidance*

CEQ prepared *Environmental Justice Guidance under the National Environmental Policy Act* (CEQ 1997) for performing environmental justice analyses as part of the NEPA process. The guidance provides definitions, thresholds, and overall methodology for environmental justice analyses, including the following:

- **Minority.** Individuals who identify themselves as American Indian or Alaska Native, Hispanic or Latino, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, some other race, or member of two or more races. For purposes of this EIS, the definition has been updated from the population groups listed in CEQ (1997) to include groups currently listed on the U.S. Census form.
- **Minority population.** Minority populations should be identified in a NEPA document where either (a) the minority population of an affected area exceeds 50 percent, or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. For purposes of this EIS, “meaningfully greater” is defined as more than 10 percentage points higher than the general population of the geographic unit of the VA BHHCS service area in the states of South Dakota, Nebraska, and Wyoming.
- **Low-income population.** Low-income populations in an affected area are identified based on the annual statistical poverty thresholds from the U.S. Census Bureau’s Current Population Reports, Series P60, Income and Poverty. For purposes of this EIS, a “low-income population” is defined similarly to a minority population in terms of percentages of persons in the affected area.

### **3.15.1.3      *Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks***

Under Executive Order 13045, each federal agency must identify and assess environmental health risks and safety risks that may disproportionately affect children, and ensure that its actions address disproportionate risks to children that result from environmental health risk or safety risks.

### **3.15.1.4      *Interagency Environmental Justice Memorandum of Understanding and VA Strategy***

In 2011, VA and 16 other federal agencies signed the *Memorandum of Understanding on Environmental Justice and Executive Order 12898* (Holder et al. 2011). Combined, Executive Order 12898 and the Memorandum of Understanding:

- Require each covered and participating agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”
- Declare the continued importance of identifying and addressing environmental justice considerations in agency programs, policies, and activities as provided in Executive Order 12898.
- Renew the process for agencies to provide environmental justice strategies and implementation progress reports.
- Establish structures and procedures to ensure that the Environmental Justice Interagency Working Group operates effectively and efficiently.
- Require development or review/update of each agency’s environmental justice strategy.
- Require agencies to provide opportunities for the public to submit comments and recommendations relating to the agency’s environmental justice strategy, annual implementation progress reports, and ongoing efforts to incorporate environmental justice principles into its programs, policies, and activities.

The VA Environmental Justice Strategy is a dynamic framework intended to be a living document. This strategy was drafted as an initial step in an ongoing effort to ensure integration of environmental justice objectives into VA’s activities. VA has adopted the following three goals for its environmental justice strategy:

- Identify and address VA programs, policies, and activities that may have disproportionately high and adverse human health or environmental effects on minority, low-income, or tribal populations.
- Ensure transparent and accessible information sharing and promote public participation for programs, activities, and operations that have potential environmental justice implications.
- Identify areas to improve research and data collection methods.

## 3.15.2 Current Conditions

The affected area for identifying environmental justice populations based on minority and low-income status consists of the counties in the VA BHHCS service area, which covers western South Dakota, northwestern Nebraska, and eastern Wyoming (see Figure 1.1-1). The counties are listed in Tables 3.15-1 through 3.15-6.

Data on populations of concern and poverty status for purpose of identifying minority and low-income composition in the affected area are from the 2010 U.S. Census, with income adjusted for inflation to 2013 dollars. Poverty thresholds are updated annually for inflation by the U.S. Census Bureau and are used for calculating official poverty population statistics. The dollar value thresholds vary by family size and composition (adults and children), but do not vary geographically. The Census Bureau calculates a weighted average poverty threshold based on the relative number of families in each size and composition. The weighted average provides a general sense of the poverty level. For purposes of this EIS, the census categories of “all families” and “all people” are used, along with the weighted average poverty threshold for one and four persons.

### 3.15.2.1 Demographic Conditions: VA BHHCS Service Area in South Dakota

Table 3.15-1 presents demographic data for each of the counties in the VA BHHCS service area in South Dakota. The counties for which minority populations are identified based on the guidance in CEQ (1997) are Bennett, Corson, Dewey, Jackson, Mellette, Oglala Lakota (previously Shannon), Todd, and Ziebach. These counties represent the Indian reservations, and accordingly, these populations consist primarily of Native American people (Census 2010).

As shown in the table, minority persons in the VA BHHCS service area in South Dakota are approximately 27.9 percent of the population. In addition to the eight counties listed above, Lyman County’s minority percentage is meaningfully greater (10 percentage points higher) than the service area. For comparison, the number of minority persons in the State of South Dakota is approximately 17.6 percent of the total population. The eight counties listed above along with Lyman County have minority population percentages that are meaningfully greater than the state’s percentage.

The number of children, defined in the U.S. Census as persons 18 years and younger, varies among the counties. The percentage of children in the total population in the VA BHHCS service area and the State of South Dakota is fairly similar at approximately 25 percent.



**Table 3.15-1. Populations of Concern, South Dakota Counties in VA BHHCS Service Area.**

County	Total Population	Minority		Children	
		Number of Persons	Percent Total Population	Number of Persons	Percent Total Population
Bennett	3,431	2,341	68.2%	1,189	34.7%
Butte	10,110	890	8.8%	2,527	25.0%
Corson	4,050	2,952	72.9%	1,390	34.3%
Custer	8,216	661	8.0%	1,630	19.8%
Dewey	5,301	4,284	80.8%	1,803	34.0%
Fall River	7,094	966	13.6%	1,334	18.8%
Haakon	1,937	120	6.2%	431	22.3%
Harding	1,255	71	5.7%	292	23.3%
Hughes	17,022	2,979	17.5%	4,017	23.6%
Jackson	3,031	1,774	58.5%	997	32.9%
Jones	1,006	57	5.7%	225	22.4%
Lawrence	24,097	1,962	8.1%	4,720	19.6%
Lyman	3,755	1,606	42.8%	1,106	29.5%
Meade	25,434	2,802	11.0%	6,415	25.2%
Mellette	2,048	1,264	61.7%	661	32.3%
Oglala Lakota	13,586	13,487	99.3%	5,342	39.3%
Pennington	100,948	20,642	20.4%	24,837	24.6%
Perkins	2,982	112	3.8%	639	21.4%
Stanley	2,966	317	10.7%	721	24.3%
Todd	9,612	8,918	92.8%	3,857	40.1%
Tripp	5,644	1,015	18.0%	1,323	23.4%
Ziebach	2,801	2,278	81.3%	1,095	39.1%
Total for VA BHHCS service area in South Dakota	256,326	71,498	27.9%	66,551	25.9%
South Dakota	844,877	148,698	17.6%	207,840	24.6%

Source: Census 2010.

Table 3.15-2 shows the percentage of families and individuals living below the poverty level in the South Dakota counties in the VA BHHCS service area. Bennett, Corson, Dewey, Mellette, Oglala Lakota, Todd, and Ziebach Counties have families or persons living below the poverty level at a meaningfully greater percentage (10 percentage points higher) than the VA BHHCS service area in South Dakota and the State of South Dakota. The average percentage of families and persons living below the poverty level in the VA BHHCS service area in South Dakota is not meaningfully greater than the state's percentage.

**Table 3.15-2. Poverty Information, South Dakota Counties in VA BHHCS Service Area.**

<b>County</b>	<b>Families Below Poverty Level<sup>1</sup></b>	<b>Persons Below Poverty Level<sup>1</sup></b>
Bennett	30.3%	39.3%
Butte	7.2%	10.2%
Corson	32.1%	44.2%
Custer	5.1%	10.3%
Dewey	24.8%	33.3%
Fall River	12.1%	17.4%
Haakon	12.7%	14.9%
Harding	14.6%	17.6%
Hughes	6.0%	11.4%
Jackson	14.5%	22.3%
Jones	11.0%	14.4%
Lawrence	8.2%	14.4%
Lyman	13.6%	17.0%
Meade	8.5%	11.0%
Mellette	27.7%	36.6%
Oglala Lakota	45.4%	53.2%
Pennington	8.9%	13.5%
Perkins	6.9%	14.1%
Stanley	7.1%	10.2%
Todd	39.1%	44.6%
Tripp	16.1%	20.6%
Ziebach	39.3%	42.3%
Aggregate average for VA BHHCS service area in South Dakota	18.3%	23.9%
South Dakota	9.1%	14.1%
Weighted average poverty threshold	\$23,834 <sup>2</sup>	\$11,888 <sup>3</sup>

<sup>1</sup> Based on 2013 inflation adjusted dollars.

<sup>2</sup> Four-person family.

<sup>3</sup> One person.

Source: Census 2013a, 2013b.

### 3.15.2.2 Demographic Conditions: VA BHHCS Service Area in Nebraska

Table 3.15-3 presents demographic data for each of the counties in the VA BHHCS service area in Nebraska. Minority persons do not exceed 50 percent of the population in any county. As shown in the table, minority persons in the VA BHHCS service area in Nebraska are approximately 24.6 percent of the population, which is approximately the same as the State of Nebraska at 24.9 percent. No county has a percentage of minority persons that is meaningfully greater (10 percentage points higher) than the VA BHHCS service area in Nebraska. However, Scotts Bluff County's minority percentage is meaningfully greater than the state's percentage.

The percentage of children in the total population in the VA BHHCS service area and the State of Nebraska are similar at approximately 24 percent.

**Table 3.15-3. Populations of Concern, Nebraska Counties in VA BHHCS Service Area.**

County	Total Population	Minority		Children	
		Number of Persons	Percent Total Population	Number of Persons	Percent Total Population
Box Butte	11,308	2,316	20.5%	2,849	25.2%
Cherry	5,713	628	11.0%	1,265	22.1%
Dawes	9,182	1,280	13.9%	1,766	19.2%
Garden	2,057	150	7.3%	382	18.6%
Grant	614	17	2.8%	115	18.7%
Morrill	5,042	1,129	22.4%	1,210	24.0%
Scotts Bluff	36,970	12,448	33.7%	9,152	24.8%
Sheridan	5,469	1,011	18.5%	1,293	23.6%
Sioux	1,311	103	7.9%	293	22.3%
Total for VA BHHCS service area in Nebraska	77,666	19,082	24.6%	18,325	23.6%
Nebraska	1,868,516	377,440	20.2%	465,260	24.9%

Source: Census 2010.

Table 3.15-4 shows the percentage of families and individuals living below the poverty level in the Nebraska counties in the VA BHHCS service area. None of the counties have families or persons living below the poverty level at a meaningfully greater percentage (10 percentage points higher) than the VA BHHCS service area. However, the percentage of individuals below the poverty level in Box Butte County is meaningfully greater than the state's percentage.

**Table 3.15-4. Poverty Information, Nebraska Counties in VA BHHCS Service Area.**

County	Families Below Poverty Level <sup>1</sup>	Persons Below Poverty Level <sup>1</sup>
Box Butte	17.3%	23.9%
Cherry	6.1%	13.0%
Dawes	7.8%	19.3%
Garden	7.2%	9.4%
Grant	10.3%	18.8%
Morrill	10.9%	13.8%
Scotts Bluff	10.2%	13.7%
Sheridan	12.9%	16.0%
Sioux	7.7%	9.3%
Aggregate average for VA BHHCS service area in Nebraska	10.04%	15.24%
Nebraska	8.6%	12.8%
Weighted average poverty threshold	\$23,834 <sup>2</sup>	\$11,888 <sup>3</sup>

<sup>1</sup> Based on 2013 inflation adjusted dollars.

<sup>2</sup> Four-person family.

<sup>3</sup> One person.

Source: Census 2013a, 2013b.

### 3.15.2.3 Demographic Conditions: VA BHHCS Service Area in Wyoming

Table 3.15-5 presents demographic data for each of the counties in the VA BHHCS service area in Wyoming. Minority persons do not exceed 50 percent of the population in any county. As shown in the table, minority persons in the VA BHHCS service area in Wyoming are approximately 6.1 percent of the population. No county has a percentage of minority persons that is meaningfully greater (10 percentage points higher) than the VA BHHCS service area in Wyoming. The minority population percentages of each county and the VA BHHCS service area are all less than the State of Wyoming's percentage.

**Table 3.15-5. Populations of Concern, Wyoming Counties in VA BHHCS Service Area.**

County	Total Population	Minority		Children	
		Number of Persons	Percent Total Population	Number of Persons	Percent Total Population
Crook	7,083	340	4.8%	1,689	23.8%
Niobrara	2,484	139	5.9%	470	18.9%
Weston	7,208	539	7.5%	1,573	21.8%
Total for VA BHHCS service area in Wyoming	16,775	1,018	6.1%	3,732	22.2%
Wyoming	582,658	98,469	16.9%	137,507	23.6%

Source: Census 2010.

The percentages of children in the total population in the VA BHHCS service area and the State of Wyoming are similar at approximately 22 to 23 percent.

Table 3.15-6 shows the percentage of families and individuals living below the poverty level in the Wyoming counties in the VA BHHCS service area. None of the counties have families or persons living below the poverty level at a meaningfully greater percentage (10 percentage points higher) than the VA BHHCS service area in Wyoming or the State of Wyoming. The percentages of families and persons living below the poverty level in the VA BHHCS service area in Wyoming is the same as the State of Wyoming.

**Table 3.15-6. Poverty Information, Wyoming Counties in VA BHHCS Service Area.**

<b>County</b>	<b>Families Below Poverty Level<sup>1</sup></b>	<b>Persons Below Poverty Level<sup>1</sup></b>
Crook	4.3%	6.7%
Niobrara	8.8%	16.3%
Weston	9.0%	11.2%
Aggregate average for VA BHHCS service area in Wyoming	7.4%	11.4%
Wyoming	7.7%	11.5%
Weighted average poverty threshold	\$23,834 <sup>2</sup>	\$11,888 <sup>3</sup>

<sup>1</sup> Based on 2013 inflation adjusted dollars.

<sup>2</sup> Four-person family.

<sup>3</sup> One person.

Source: Census 2013a, 2013b.



### 3.16 Other Past, Present, and Reasonably Foreseeable Projects

In accordance with 40 CFR 1508.7, “cumulative impact” is the impact on the environment which results from the incremental impact of the action when added to the other past, present and reasonably future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. This section identifies other past, present and reasonably foreseeable projects and actions that are considered in the evaluation of cumulative impacts. Data sources include:

- VA BHHCS (other VA projects in BHHCS catchment area)
- U.S. Forest Service, Black Hills National Forest (current and recent NEPA projects)
- South Dakota Department of Environment and Natural Resources (permits/applications for oil and gas, mining)
- South Dakota Public Utility Commission (actions related to energy and transmission projects)
- South Dakota Department of Transportation (highway/bridge construction projects)
- Nuclear Regulatory Commission (EIS for the Dewey-Burdock Project in Custer and Fall River Counties. Supplement to the Generic EIS for In-Situ Leach Uranium Mining Facilities. January 2014)
- EPA databases for other recent EISs within South Dakota
- Rapid City Comprehensive Plan (adopted April 2014)
- American Recovery and Reinvestment Projects (large infrastructure and transportation projects)
- In-person observations

Table 3.16-1 lists the projects identified during this process.

**Table 3.16-1. Projects Considered in Cumulative Impacts Analysis.**

Project Description
Expansion of State Veterans Home in Hot Springs [completed March 2016] 2500 Minnekahta Avenue, Hot Springs, SD Construction of new 133,000 ft <sup>2</sup> two-story building at the Michael J. Fitzmaurice South Dakota Veteran’s Home and demolition of existing Building 4 (previously used as an infirmary)
Fall River County Health Service (Hospital) 1209 Highway 71 South, Hot Springs, SD Plans to update Castle Manor Nursing Home by building a new structure and bringing the services onto the campus of Fall River Health Services in next few years
Proposed Teckla-Osage-Lange 230-Kilovolt Transmission Line Crosses Black Hills National Forest from the South Dakota/Wyoming border through Pennington County to Pactola substation to the Lange substation northwest of Rapid City. Proposed 144-mile transmission line (Black Hills Power), including 37 miles of National Forest System land and through a right-of-way through Rapid City [ROD issued May 2015]

<b>Project Description</b>	
Southern Black Hills Water System Construction and Operation [Phase II currently underway] Construction of water system to provide potable water to rural residents of Southern Black Hills area of South Dakota (along Argyle Road). Southern boundary of Phase I service area lies immediately north of Hot Springs; southern boundary of Phase II service area lies immediately northwest of Hot Springs.	
Transportation projects in Hot Springs area <ul style="list-style-type: none"> <li>• US 79 Concrete pavement repair, northbound and southbound lanes, Junction US 18 (runs through Hot Springs) north to Junction SD-36 [recently completed];</li> <li>• US 18 from junction with US 385 to the southeast city limits of Hot Springs (1.1. mile along US 18/US 385); urban reconstruction, PCC surfacing, surfacing, curb and gutter, sidewalk, roadway lighting, traffic signals (2019)</li> </ul>	
Transportation projects in Rapid City area [Planned for 2016] <ul style="list-style-type: none"> <li>• I-190 from Omaha Street North to I-90 in Rapid City (grading and urban reconstruction)</li> <li>• SD 79 from Junction 16B at Rapid City south 18.2 miles (surfacing and shoulder repair)</li> <li>• US 16 - Mt. Rushmore Road from St. James Street to Omaha Street (urban grading, surfacing, storm sewer, lighting and signals)</li> <li>• SD 44 – Jackson Boulevard in Rapid City from Chapel Lane to Rapid Creek west of Argyle Street (grading and urban reconstruction)</li> </ul>	

In addition to these defined projects, there are other general community development objectives, resource uses, and disturbances that may occur in the Hot Springs and Rapid City areas. Table 3.16-2 lists examples of actions for which timing and location are generally not predictable in terms of their specific likelihood during construction or operation of VA's reconfigured BHHCS.

**Table 3.16-2. Other Generalized Actions and Disturbances (Ongoing) Considered in Cumulative Impacts Analysis.**

<b>Action</b>	<b>Description</b>
Wildfires	The frequency, size and intensity of possible wildfires depend upon various factors, including weather, ignition means, and fuels loadings. The Black Hills area has a level of wildland fire fuel hazard as a result of mountain pine beetle destruction of pines.
Livestock grazing Range development	Developments include fencing, dugouts, wells, and spring developments. Permitted livestock grazing would continue on National Forest system and private lands.
Vegetation treatment	Commercial and non-commercial vegetation treatments would continue in the area. Treatments may include mechanical or chemical measures to achieve timber harvest, hardwood restoration, meadow restoration, and fuel treatments. These types of treatments may also occur on private land but at a smaller scale.

Action	Description
Recreational activities (motorized, hunting, fishing)	Recreation activities including hunting, fishing, hiking, skiing, and the use of off-road vehicles would continue in the area.
Subdivision and development of residential areas in Fall River and Pennington Counties	Given current trends, it is likely that additional private lands may be subdivided and new residences constructed. Additional special use permits such as utility, water line, rights of way, and access/easements may be requested.
Special use permits related to utility lines and transmission line projects	The area contains telephone overhead and underground distribution and transmission power utility lines under special use permits. Maintenance is ongoing for these facilities.
Targets/goals for Rapid City as identified in 10-year Comprehensive Plan (adopted in 2014).	Examples include: <ul style="list-style-type: none"> <li>• Downtown revitalization (Rapid City): Priorities are enhancing connections to and between major destinations, mixed income housing, employment space, and retail/entertainment; encourage and enhance infill development; encourage multi-family housing project in downtown area.</li> <li>• Study Box Elder drainage basin to identify future stormwater infrastructure needs in the area prior to development.</li> <li>• Plan for new north-south roadway connection between Rapid City Regional Airport and I-90; assess feasibility of connection between airport and rail to enhance efficiency of freight transfers.</li> <li>• Water and sewer infrastructure expansion.</li> </ul>

In addition to individual project and generalized actions, the cumulative impact analysis considers changes in the economic conditions that have occurred in Fall River County and within the Hot Springs community over the past 15 years, including past actions at campus Hot Springs Campus. This is partly in response to public comment but also consistent with EPA and CEQ guidance that recommends the examination of past trends as a way to look at the accumulated effect of past actions.

Finally, it considers two additional actions at the Fort Meade and Hot Springs Campuses:

1. Activities (ongoing or future) at the campus Fort Meade are being considered in the cumulative impact analysis, even though such activities are not part of the proposed reconfiguration. The addition of the Fort Meade campus is partly in response to public comment; it has also been added to the APE for historic resources and it represents another ongoing action occurring within the VA BHHCS service area. The Fort Meade campus has required modifications in the past to meet modern healthcare needs and it is anticipated that the campus likely will require alterations in the future to continue to perform its mission. One recent project at the Fort Meade campus includes a two-story addition to the north side of Building #113 (the main hospital). The VA BHHCS conducted a separate NEPA review for this action in 2013 (Holmgren, 2013) and notified the SD SHPO of this action in 2013. VA received SHPO concurrence on their determination that the project would not adversely affect historic properties on or near the VA Fort Meade campus (SHPO 2013). This new wing was completed in July 2016.

The Fort Meade campus is likely to require other modifications to continue to provide healthcare to Veterans, independent of the proposed reconfiguration. While these modifications are unknown at this time, VA BHHCS will continue to comply with NEPA and NHPA regarding any future modifications involving the Fort Meade campus.

2. VA proposes to create a VHA Pharmacy call center in Buildings 3 and 4 of the Hot Springs Campus of the VA BHHCS; it could potentially open before the end of 2016. The project would involve outfitting interior space of the vacant historic buildings with workstations to accommodate approximately 120 employees; the installation of telecommunications and power cabling; and new surface treatments such as flooring and paint. No physical changes are required outside buildings 3 and 4 of the Hot Springs Campus, so VA has defined the APE to include only these two buildings (3 & 4).
3. VA proposes to create a National VHA Pharmacy call center in Buildings 3 and 4 of the Hot Springs Campus of the VA BHHCS; it could potentially open before the end of 2016. The project would involve outfitting interior space of the vacant historic buildings with workstations to accommodate approximately 120 employees; the installation of telecommunications and power cabling; and new surface treatments such as flooring and paint. VA BHHCS has defined the APE as buildings 3 and 4 of the Hot Springs Campus, as no work is proposed external to the building.

Because it is a recently identified potential future action occurring on the Hot Springs Campus, it is being identified and addressed as part of the cumulative impact analysis in the Final EIS consistent with CEQ NEPA regulations and CEQ cumulative impact guidance.

## 4.0 ENVIRONMENTAL CONSEQUENCES

This chapter presents the evaluation of the alternatives' direct, indirect, and cumulative environmental impacts. The sections of this chapter are organized by resource, with information presented in the same sequence as in Chapter 3 to provide a logical flow for the discussion. The baseline for determining potential impacts is the current condition described in Chapter 3. Each resource-specific section (Sections 4.1 through 4.15) provides (1) the evaluation criteria by which the analysis determined whether there is an adverse impact to the resource, and (2) the analysis of impacts to that resource from each of Alternatives A through F and Supplemental Alternative G. Potential impacts from each alternative are discussed separately for construction (short-term impacts) and operation (long-term impacts). The Impacts Summary Table in the Executive Summary summarizes the impacts of each alternative. Section 4.17 discusses the proposal's potential for generating substantial controversy (required by the Department of Veterans Affairs' [VA's] interim *National Environmental Policy Act* (NEPA) guidance). Sections 4.18 through 4.20 provide specific analyses required by the Council on Environmental Quality's (CEQ's) NEPA regulations: unavoidable adverse impacts, the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity, and irreversible or irretrievable commitments of resources.

Because certain aspects of the alternatives are not narrowly defined at this stage of project development (such as the specific location of new construction in the Hot Springs or Rapid City areas), a conservative scenario of environmental effects for each resource is evaluated throughout this chapter. This approach ensures an estimate of any adverse impacts that is unlikely to be exceeded in the actual design and implementation of an alternative. In addition, this Final EIS includes revisions to the scope and analysis of STVA Alternative E in response to STVA comments on the Draft EIS. Specifically, STVA clarified three key assumptions VA had made in the original analysis. These include:

- Construction of a new 82-patient bed facility was not envisioned; STVA thought other existing space could be found to reach a 200 bed count or they would be willing to reduce the bed count);
- The estimated number of employees (633) should not exceed maximum staffing levels in the past and 492 is considered a more reasonable estimate; and
- While the original STVA proposal was limited only to activities on the Hot Springs Campus, VA's assumption that STVA wanted to continue CBOC operations in Rapid City was in error; STVA also supports an MSOC in Rapid City.

VA has made the requested corrections and updated the analysis for Alternative E accordingly. With respect to elimination of the 82-bed facility new construction, the updates have been mostly qualitative in nature. Where the original analysis included quantitative data, the original analysis was retained in the absence of replacement data as to the level of new construction activities (onsite or offsite) that still might be required. Such an approach is acceptable since it provides a bounding analysis with respect to the impacts at Hot Springs (since more acreage would be potentially affected under the original analysis), and impacts from the original analysis were not found to be significant or require any special mitigation to address. As discussed in Section 1.3, it is beyond the scope of this environmental impact statement (EIS) (and not subject to NEPA review) to determine the health care services that VA offers or will offer at any location, even though some relevant service



information is included in Chapter 2 to provide context for the features of the alternatives. Details of health care services are only discussed in this chapter as they are incidental to impacts of the alternatives in terms of physical buildings and infrastructure.

### *Impact Terminology*

An **impact** is defined as a modification of the existing environment that is brought about by an outside action. The terms **effect** and **impact** as used in this document are synonymous and could be beneficial or adverse.

Adverse impacts are defined in terms of context and intensity. **Context** relates to environmental circumstances at the location of the impact and its immediate vicinity, as well as other interests that are potentially affected. **Intensity** refers to the severity or extent of the impact or magnitude of change from existing conditions. Impact intensity is used in the determination of the severity and magnitude of an impact, and helps determine whether mitigation is needed to lessen the impact. The following terms are among those that are applied in this EIS to describe the intensity of adverse impacts:

- None/no impact: No change from current conditions.
- Negligible impacts: No measurable or discernible change from current conditions.
- Minor impacts: Slight but detectable; there would be a small change. Effects are generally short-term and highly localized.
- Moderate impacts: Readily apparent; there would be a noticeable change that could result in major short-term or moderate long-term impacts.
- Major impacts: Large and highly noticeable; long-term or permanent.

The duration of the impact is important in evaluating its intensity:

- Short-term impacts occur only for a short time after implementation of a management action; for example, construction noise impacts from construction activities would be considered short-term in nature.
- Long-term impacts occur for an extended period after implementation of a management action; for example, operational noise during facility operations would be a long-term impact, as it would last for as long as the facility is in operation.

**Direct effects** are caused by the action and occur at the same time and place as the action. **Indirect effects** are caused by the action and occur later in time or further in distance, but are still reasonably foreseeable (40 Code of Federal Regulations [CFR] 1508.8).

**Cumulative impacts** are those effects resulting from the incremental impacts of an action when combined with other past, present, and reasonably foreseeable future actions (regardless of which agency or person undertakes such actions) (40 CFR 1508.7). Cumulative impacts could result from individually insignificant but collectively significant actions taking place over a period of time.

### *Mitigation Measures*

The CEQ NEPA regulations (40 CFR 1508.20) state that *mitigation* includes:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (e) Compensating for the impact by replacing or providing substitute resources or environments.

The measures and best practices identified in this EIS include measures that are incorporated into an alternative; compliance with federal, state, and local regulatory requirements; best management practices incorporated into an alternative; and additional VA-proposed protective measures. The record of decision (ROD) for an EIS binds an agency to implement specific mitigation commitments stated in the ROD. In addition, compliance with regulatory requirements is enforced by the respective regulatory agency. For example, compliance with air quality regulations would be enforced by the South Dakota Department of Environment and Natural Resources (SDDENR). Where relevant for a particular alternative, the mitigation, monitoring, minimization, and best practices summarized in Chapter 5 could reduce adverse impacts identified in this chapter.

## 4.1 Aesthetics

### 4.1.1 Evaluation Criteria

A visual or aesthetic impact is the creation of an intrusion, obstruction, or noticeable contrast to the landscape that affects visual character or scenic quality. A visual effect can be considered adverse if an action obstructs what most observers would consider a scenic view or blocks or detracts from a significant feature of the landscape. The introduction of a visual element that is incompatible, out of scale, in great contrast, or out of character with the surrounding area can be an adverse visual impact. An action that eliminates open space can have an adverse effect on aesthetic or visual appeal of the area. Together with observers' attitudes, expectations, and perspectives, the extent of obstruction and the compatibility of introduced features within established views determine the subjective importance or intensity of the visual impact.

In regard to a historic property, adverse visual effects are those that diminish the property's integrity, which negatively affects its historic significance and its eligibility for listing in the National Register of Historic Places (NRHP). Visual impacts on historic properties are discussed in Section 4.3.

### 4.1.2 Alternative A-1

#### 4.1.2.1 *Impacts from Construction*

Because there would be no changes to existing buildings or construction of new buildings on the VA Hot Springs Campus, the visual appearance and aesthetic quality of the campus would not be affected.

Construction activities in Hot Springs for a community-based outpatient clinic (CBOC) and in Rapid City for a multi-specialty outpatient clinic (MSOC) and residential rehabilitation treatment program (RRTP) would temporarily affect the visual quality of the area because of the presence of heavy equipment and unfinished stages of site preparation and building construction. The visual quality impacts would change over the course of the phased construction as each task is completed, progressing toward being negligible in the later stages as landscaping is completed and work focuses on the interiors of completed buildings. The extent of the impact would depend on the visual or scenic quality of the site selected in each community, and the presence and expectations of observers of the site. Because the size of the site and building proposed in Hot Springs (a CBOC on five acres) is smaller than that proposed in Rapid City (14 to 17 acres for a co-located MSOC and RRTP), the extent of any visual impact from and during construction activities would be less in Hot Springs in both space and time.

Construction activities would be limited to daylight hours so there would be no impact from nighttime lighting from the use of construction equipment lights. Security lighting could be required for construction staging areas, which would have a minor impact relative to nighttime light levels near the sites; however, security lighting would be directed downward to minimize light trespass onto adjacent property and land uses.

### **4.1.2.2      *Impacts from Operation***

VA would continue to maintain the Hot Springs Campus so there would be no change or effect to the visual or aesthetic appearance of the campus, although health care operations would cease at this location.

The size and height of each building proposed for Hot Springs and Rapid City would vary as described in Section 2.3.1, and could affect the visual appearance of the site selected in each community. These buildings could create a noticeable contrast to the landscape surrounding the selected site. An undeveloped site on the suburban edge of the community could intrude on the scenic quality of the surrounding landscape, whereas an infill development would not likely affect a scenic landscape. The extent of any impact would depend on the visual or scenic quality of the selected site in each community and surrounding land uses, and would also depend on the compatibility of the buildings with existing or planned land use and zoning of the selected sites. Building setbacks, perimeter fences, and landscaping must conform to physical security and antiterrorism design requirements for VA facilities defined as mission critical. These requirements, along with incorporating the topography into the site layout, could minimize any noticeable presence of the buildings.

Exterior lighting around the buildings would be controlled to minimize light trespass onto adjacent properties but would be designed to provide sufficient illumination to meet physical security requirements. Lighting on roads internal to a larger site for a combined MSOC and RRTP in Rapid City would provide enough intensity so that drivers, pedestrians, and bicyclists can identify directional signage, access gates, lanes, and curbs. Exterior light fixtures would use the cutoff design that directs light downward and minimizes glare.

## **4.1.3      *Alternative A-2***

### **4.1.3.1      *Impacts from Construction***

Construction equipment and vehicles would be visible during interior renovations and modifications to Building 12. Because there would be no major exterior changes to or construction of new buildings on the VA Hot Springs Campus, the temporary presence of construction equipment would not affect the visual appearance and aesthetic quality of the campus.

Visual or aesthetic impacts from construction of an MSOC on 10 acres in Rapid City would be similar to the impacts described for Alternative A-1.

### **4.1.3.2      *Impacts from Operation***

Health care operations and maintenance would continue at the VA Hot Springs Campus, so there would be no change or affect to the visual or aesthetic appearance of the campus.

The size and height of the MSOC proposed for Rapid City would be as described in Section 2.3.1, and could affect the visual appearance of the selected site. Any impacts to the visual appearance or scenic quality of the selected site from the design and placement of the building would be similar to the impacts described for Alternative A-1.

## **4.1.4 Alternative B**

### **4.1.4.1 Impacts from Construction**

Because there would be no changes to existing buildings or construction of new buildings on the VA Hot Springs Campus, the visual appearance and aesthetic quality of the campus would not be affected.

Visual or aesthetic impacts from construction would be similar to the impacts described for Alternative A-1. Because only an MSOC (10 acres) is proposed for Rapid City, the extent of any temporary construction-related impact on the visual quality of the selected site could be less than in Hot Springs where a co-located CBOC and RRTP (11 to 13 acres) are proposed.

### **4.1.4.2 Impacts from Operation**

VA would continue to maintain the Hot Springs Campus so there would be no change or effect to the visual or aesthetic appearance of the campus, although health care operations would cease at this location.

The size and height of each building proposed for Hot Springs and Rapid City would vary as described in Section 2.3.2, and could affect the visual appearance of the site selected in each community. Any impacts to the visual appearance or scenic quality of the selected sites from the design and placement of the buildings would be similar to the impacts described for Alternative A-1.

## **4.1.5 Alternative C**

### **4.1.5.1 Impacts from Construction**

Construction equipment and vehicles would be visible during interior renovations and modifications to Building 12 and the domiciliary. Because there would be no major exterior changes to or construction of new buildings on the VA Hot Springs Campus, the temporary presence of construction equipment would not affect the visual appearance and aesthetic quality of the campus.

Visual or aesthetic impacts from construction of an MSOC on 10 acres in Rapid City would be similar to the impacts described for Alternative A-1.

### **4.1.5.2 Impacts from Operation**

Health care operations and maintenance would continue at the VA Hot Springs Campus, so there would be no change or affect to the visual or aesthetic appearance of the campus.

The size and height of the MSOC proposed for Rapid City would be as described in Section 2.3.1, and could affect the visual appearance of the selected site. Any impacts to the visual appearance or scenic quality of the selected site from the design and placement of the building would be similar to the impacts described for Alternative A-1.



## **4.1.6 Alternative D**

### **4.1.6.1 Impacts from Construction**

Because there would be no changes to existing buildings or construction of new buildings on the VA Hot Springs Campus, the visual appearance and aesthetic quality of the campus would not be affected.

Visual or aesthetic impacts from construction would be similar to the impacts described for Alternative A-1. Because the size of the site and buildings proposed in Hot Springs (11 to 13 acres for co-located CBOC and RRTP) is slightly smaller than what would be needed in Rapid City (14 to 17 acres for co-located MSOC and RRTP), the extent of any visual impact from and during construction activities could be slightly less in Hot Springs in both space and time.

### **4.1.6.2 Impacts from Operation**

VA would continue to maintain the Hot Springs Campus so there would be no change or effect to the visual or aesthetic appearance of the campus, although health care operations would cease at this location.

The size and height of each building proposed for Hot Springs and Rapid City would vary as described in Section 2.3.4, and could affect the visual appearance of the site selected in each community. Any impacts to the visual appearance or scenic quality of the selected sites from the design and placement of the buildings would be similar to the impacts described for Alternative A-1.

## **4.1.7 Alternative E**

### **4.1.7.1 Impacts from Construction**

Construction equipment and vehicles would be visible during interior and exterior renovations and modifications of numerous buildings on the Hot Springs Campus and during construction of any other new structures that might be required for displaced activities as described in Section 2.3.5. Open space that might be suitable for any new structure is scattered throughout the campus, so the presence of construction equipment and ongoing construction activities would temporarily affect the visual appearance and aesthetic quality of the campus.

Construction of the proposed MSOC (10 acres) in Rapid City would result in temporary effects on aesthetics and visual appearance from construction activities. Impacts in Rapid City would be the same as those described for Alternative B which also includes a stand alone MSOC in Rapid City.

### **4.1.7.2 Impacts from Operation**

Construction on open space that might be suitable to construct any potential new structure that might be required would change the visual appearance and scenic quality of the original core of the campus. The building would likely be designed similar to other buildings on campus for aesthetics, and any adverse effects would likely be minimal because of observers' expectations and attitudes regarding any additional building.

Any construction in open spaces within the loop near the staff quarters would also affect the visual appearance of this area. Similar housing designs and construction materials could minimize the

visual intrusion and aesthetic impacts of new buildings. Simulated views of additional housing adjacent to the existing housing are shown in Figure 4.1-1.

Any construction of new buildings on the open space at the main entrance from North 5<sup>th</sup> Street would affect the visual appearance and scenic quality of the campus. These buildings would be out of character for the entrance but would likely be seen by observers as compatible with the view; thus, any adverse visual effects would be minimal.

The size and height of the MSOC proposed for Rapid City could affect the visual appearance of the site selected in the community. Any impacts to the visual appearance or scenic quality of the selected site from the design and placement of the building would be similar to the impacts described for Alternative A-1.



Figure 4.1-1. Visual Simulations of Possible Locations for Additional Housing.

## 4.1.8 Alternative F

### 4.1.8.1 Impacts from Construction

Upgrades and renovations to buildings to maintain clinical standards would be initiated as funding was available through the routine budgeting process. Construction equipment and vehicles would be visible during interior renovations and modifications to buildings. Because there would be no major exterior changes or construction of new buildings on the VA Hot Springs Campus, the temporary presence of construction equipment would not affect the visual appearance and aesthetic quality of the campus.

There would be no changes to the existing CBOC in Rapid City that would have any temporary effects on aesthetics or visual appearance from construction activities. If other space is leased upon the expiration of the current lease, that new location could require interior modifications to the building. Any impacts to the visual appearance of the area would be limited to the temporary presence of construction vehicles.

#### **4.1.8.2      *Impacts from Operation***

Health care operations and maintenance would continue at the VA Hot Springs Campus. The VA Black Hills Health Care System (BHHCS) has no plans that would require construction of new buildings or major exterior modifications or additions to existing buildings to support operations, so there would be no change or affect to the visual or aesthetic appearance of the campus.

There would be no changes to health care operations in Rapid City that would have any effect on aesthetics or visual quality of the area.

### **4.1.9      Supplemental Alternative G**

#### **4.1.9.1      *Impacts from Construction***

The effects on the visual appearance or scenic quality of the VA Hot Springs Campus would depend on the selected re-use. Should the selected re-use include construction of new buildings on the campus or major exterior modifications or additions, construction activities and the presence of construction equipment would temporarily affect the visual appearance of the campus. The extent of the visual impact would depend on the location, size, and timing of construction. Impacts could be similar to those from Alternatives E (if some new construction was initiated) or F (if there was no new construction).

#### **4.1.9.2      *Impacts from Operation***

The type of re-use of the VA Hot Springs Campus would determine the extent of effects to the visual appearance, aesthetics, or scenic quality of the campus. The addition and placement of new buildings on the campus to support different operations could have a visual effect on the campus landscape and appearance, and would be similar to the impacts described for Alternative E. If no new buildings are constructed and the overall level of campus activity is similar to that due to current VA health care services, operational impacts would be similar to those of Alternative F.

## 4.2 Air Quality

### 4.2.1 Evaluation Criteria

All of South Dakota is in attainment or unclassified for all National Ambient Air Quality Standards (NAAQS). The alternatives are evaluated for their potential to result in a net increase in pollutants that causes or contributes to a violation of the NAAQS, exposes sensitive receptors to substantially increased pollutant concentrations, or exceeds any evaluation criteria established by a state implementation plan.

For this EIS, the proposed action occurs in an attainment area, therefore the *de minimis* levels do not apply and no conformity determination is required for proposed federal actions.

### 4.2.2 Alternative A-1

Alternative A-1 would have short-term minor impacts to air quality during construction of new facilities in Rapid City and Hot Springs. In the long term, the impact to air quality from operations would be negligible as a result of operating from newer facilities designed for energy efficiency in accordance with VA Office of Construction & Facilities Management (CFM) guidelines.

#### 4.2.2.1 Impacts from Construction

The overall construction period for each new facility (CBOC in Hot Springs, MSOC and RRTP in Rapid City) would be approximately two years, with site clearing, excavation, and grading largely accomplished in the first year. Should VA BHHCS lease facilities, air quality impacts from potential customization of the facility for VA use would be minimal, less than those from constructing a new facility.

Particulates are the main air pollutant of concern from construction projects. VA would comply with the South Dakota Natural Events Action Plan, Pennington County Ordinance 12 and Rapid City Code of Ordinance 8.34, both of which are titled *Fugitive Emissions and the Abatement of Smoke*, where applicable. Figure 3.2-1 and 3.2-2 illustrate the Rapid City area locations subject these local rules. The Natural Events Action Plan applies to the west Rapid City area (see Figure 3.2-2) and requires, in part, voluntary cessation of construction or use of control measures during high wind dust alerts.

Reasonably available control technology requirements for minimizing fugitive dust during construction activities, listed in Pennington County Ordinance 12 and Rapid City Code of Ordinance 8.34, include but are not limited to:

- Wetting down
- Chemical stabilization
- Applying dust palliative
- Minimization of area disturbed
- Reclamation of disturbed area as soon as possible
- Vehicular speed limitation
- Cleaning of paved areas



Construction activities would generate both coarse and fine particulate emissions from excavation, soil removal, site grading, and small-scale road construction. The amount of particulate emissions can be estimated from the amount of ground surface exposed, the type and intensity of activity, soil type and conditions, wind speed, and dust control measures used. Total suspended particulates were calculated using the emission factor for heavy construction activity operations specified in AP-42 Compilation for Air Pollutant Emission Factors (EPA 1995) resulting in conservative estimates of particulate emissions shown in Table 4.2-1. Reasonably available control technology requirements for construction activities would be applied.

**Table 4.2-1. Estimated Year 1 Particulate Emissions from Construction—Alternative A-1**

Facility	Lot size (acres)	Construction Duration (months)	Emission Factor (tons/acre/month)*	Control Efficiency (%)	Total Particulate Emissions (tons/year)
Hot Springs CBOC	5	12	1.2	80	14.4
Rapid City MSOC	10	12	1.2	80	28.8
Rapid City RRTP	10	12	1.2	80	28.8
Total	25	12			72

\*Emission factor from Section 13.2.3 "Heavy Construction Operations" (dated 1/95), of AP-42 (EPA 1995).

The estimated 57.6 tons of particulates emitted from VA's Rapid City construction would be a 0.53 percent increase in the approximately 10,800 tons per year of particulates already emitted annually in Pennington County (EPA 2015). The 14.4 tons emitted from Hot Springs construction would be a 0.33 percent increase in the approximately 4,365 tons per year of particulates already emitted in Fall River County (EPA 2015). Thus, fugitive dust emissions from construction under Alternative A-1 would have a negligible impact on regional air quality.

#### **4.2.2.2 Impacts from Operation**

Under Alternative A-1, VA BHHCS emissions from the existing Hot Springs Campus facilities would be reduced, although emissions from the campus would continue at some decreased level providing for facility maintenance or would be attributable to re-use of the campus, at a level estimated not to exceed the current emissions levels (as characterized for Alternative F, No Action, in Section 4.2.8).

Operation of newly or recently constructed facilities would produce air emissions through:

- Propane combustion for heat and hot water (Hot Springs)
- Propane storage and dispensing (Hot Springs)
- Natural gas combustion for heating and hot water (Rapid City)
- Electricity use (indirect emissions)
- Emergency generator(s) (RRTP only)
- Patient and employee commuting
- Ongoing maintenance and landscaping activities

In Hot Springs, the primary option for heating large facilities is propane stored onsite, and this is assumed to be the case for operation of new facilities in Hot Springs. Emissions from propane combustion would be directly attributable to VA BHHCS operations. Propane combustion produces mostly gaseous emissions and a lesser amount of particulate emissions. Pollutants from combustion (aside from carbon dioxide) are nitrogen oxides, carbon monoxide, sulfur dioxide, particulate matter (PM), and total organic compounds (EPA 1992). Fugitive emissions may also result from propane storage and dispensing, but these would be minimal compared to combustion emissions. The new facilities in Rapid City would be heated by natural gas supplied by the Montana-Dakota Utilities Company. It is further assumed that fuel oil combustion would continue at the Hot Springs Campus in order to maintain existing facilities in an unoccupied state (assumed 30 percent of the fiscal year [FY] 2014 fuel oil combustion rate).

Estimated facility heating emissions are shown in Table 4.2-2 for each of the alternatives using the projected utility requirements provided in Section 4.14, *Utilities*.

**Table 4.2-2. Estimate of Annual Emissions from Facility Heating under Each Alternative\***

Alternative	Emissions ( pounds per year)				
	Nitrogen oxides	Carbon monoxide	PM	Sulfur dioxide	Total Organic Compounds
A-1	3,988	1,030	498	5,612	165
A-2	4,589	1,108	591	6,905	172
B	4,207	1,214	499	5,612	167
C	6,362	1,395	857	10,725	178
D	4,144	1,129	505	5,613	175
E	13,938	2,973	1,898	24,172	353
F	10,611	2,228	1,454	18,692	253

\*Emission factor from Volume 1, Chapter 1 "External Combustion Sources" of AP-42 (EPA 2010).

Electricity is provided to the existing VA facilities in Rapid City and Hot Springs by Black Hills Power. Black Hills Power would also provide electricity to the new facilities proposed in Alternative A-1. Indirect emissions from electricity generation are not calculated. The quantitative impact on overall electricity use is unknown from cessation of operations at existing facilities, movement of the Hot Springs Campus into a maintenance status or re-use, and health care service operations at new facilities. However, it is likely that overall usage would decrease because newly constructed facilities would be designed to be more energy efficient (VA 2014).

An emergency generator would be required for the new 100-bed RRTP proposed to be constructed in Rapid City. Emissions would be minimal because it would only be operated if the primary electric supply was interrupted.

As illustrated by Table 2-2 in Section 2.1, Alternative A-1 would improve geographic access to care, with reduced patient travel distances. Emissions from mobile sources would decrease proportionately under Alternative A-1 compared to No Action (Alternative F). Ongoing maintenance and landscaping activities would not contribute measurably to operational emissions.

Annual greenhouse gas (GHG) emissions attributable to operations under Alternative A-1 can be estimated using accounting tools developed by the GHG Protocol. Three scopes of GHG emissions are defined in Section 3.2.2.3.2.

**Scope 1:** The Scope 1 GHG emissions calculation tool developed for the service sector by the GHG Protocol was used to estimate direct GHG emissions (WRI 2016). Direct GHG emissions from operations would predominantly include the consumption of natural gas and propane, as estimated in Section 4.14, *Utilities*, and #2 fuel oil to maintain the existing facility. Operation of fleet vehicles for landscaping and facility maintenance would also account for GHG emissions; however, such GHG emissions were assumed to be negligible when compared to GHG emissions from natural gas and propane consumption and were not included in the facility estimate. Scope 1 GHG emissions for Alternative A-1 are estimated at 1,801 t CO<sub>2</sub> eq (LEI 2016a). New equipment installed at the Hot Springs and Rapid City facilities would result in increased fuel efficiencies.

**Scope 2:** The Scope 2 GHG emissions calculation tool developed for the service sector by the GHG Protocol was used to estimate electricity indirect GHG emissions (WRI 2016), using the total electricity consumption estimated in Section 4.14, *Utilities*. Scope 2 GHG emissions for Alternative A-1 are estimated at 1,495 t CO<sub>2</sub> eq (LEI 2016b). The estimated Scope 2 GHG emissions would be reduced with the use of energy efficient equipment in the new facilities.

**Scope 3:** Other indirect GHG emissions predominantly include vehicular emissions from commuting VA employees and vehicular emissions from patient use of VA services. Transportation and ultimate disposal of VA-generated wastes were assumed to be negligible when compared to GHG emissions from other transportation sources and were not included in the facility estimate. The Scope 3 GHG emissions calculation tool developed for the service sector by the GHG Protocol was used to estimate other indirect GHG emissions from sources including employee commuting and patient transportation (WRI 2016). Several assumptions were made to determine the estimated annual vehicular mileage (LEI 2016c). Scope 3 GHG emissions for Alternative A-1 are calculated at 588 t CO<sub>2</sub> eq (LEI 2016d).

Based on the GHG emissions estimates above, GHG emissions for facility operations under Alternative A-1 would total approximately 3,883 t CO<sub>2</sub> eq. This is 62 percent less than the estimate for the existing Hot Springs Campus operations and approximately 0.012 percent of the total GHG emissions for the state of South Dakota (CAIT 2016). Therefore, GHG emissions are not predicted to significantly increase under Alternative A-1, and GHG emissions are not likely to result in adverse environmental impacts such as changes in floodplains or regional water availability.

According to the VA Design Guide for Mental Health Facilities (VA 2014), the U.S. Green Building Council Leadership in Energy and Environmental Design Project Certification is a recommended standard. The following codes and standards are adopted for new construction at a minimum:

- *Energy Policy Act of 2005*
- Energy Efficiency Standards and Energy Code for New Federal Commercial and Multi-Family Residential Buildings (10 CFR Parts 433, 434 and 435)
- The 16-agency (including VA) memorandum of understanding committing to design, construct, and operate their facilities in an energy-efficient and sustainable manner, *Federal Leadership in High Performance and Sustainable Buildings*

- Executive Order 13423, Strengthening Federal Environmental, Energy, Transportation Management
- Executive Order 13148, Greening the Government through Leadership in Environmental Management

## 4.2.3 Alternative A-2

Alternative A-2 would have short-term minor impacts to air quality during construction of new facilities in Rapid City. In the long term, the impact to air quality from operations would be negligible as a result of operating from newer facilities designed for energy efficiency in accordance with VA CFM guidelines.

### 4.2.3.1 Impacts from Construction

Construction impacts would be less than for Alternative A-1 because there would be no new construction in Hot Springs for the CBOC. Emissions from renovations to develop the CBOC within existing building 12 at the Hot Springs Campus would be negligible on a regional scale. Estimated construction emissions from Alternative A-2 are provided in Table 4.2-3.

**Table 4.2-3. Estimated Year 1 Particulate Emissions from Construction—Alternative A-2**

Facility	Lot size (acres)	Construction Duration (months)	Emission Factor (tons/acre/month)*	Control Efficiency (%)	Total Particulate Emissions (tons/year)
Rapid City MSOC	10	12	1.2	80	28.8
Rapid City RRTP	10	12	1.2	80	28.8
Total	20	12			57.6

\*Emission factor Section 13.2.3 "Heavy Construction Operations" (dated 1/95), of AP-42 (EPA 1995).

The estimated 57.6 tons of particulates emitted from VA's Rapid City construction would be a 0.53 percent increase in the approximately 10,800 tons per year of particulates already emitted annually in Pennington County (EPA 2015). Thus, fugitive dust emissions from construction under Alternative A-2 would have a negligible impact on regional air quality.

### 4.2.3.2 Impacts from Operation

In this alternative, the existing CBOC at the Hot Springs Campus would continue to operate, using fuel oil combustion as the heat source; they would be less than the current emissions levels (as characterized for Alternative F, No Action, in Section 4.2.8).

Air quality impacts for the MSOC and RRTP in Rapid City would be the same as Alternative A-1. Total emissions projections for this alternative are shown in Table 4.2-2 and are comparable to Alternative A-1.

Annual greenhouse gas (GHG) emissions attributable to operations under Alternative A-2 were estimated similarly to the process outlined for Alternative A-1 in Section 4.2.2.2.

**Scope 1:** Scope 1 GHG emissions for Alternative A-2 are estimated at 2,050 t CO<sub>2</sub> eq (LEI 2016a). New equipment installed at the Rapid City facilities would result in increased fuel efficiencies.

**Scope 2:** Scope 2 GHG emissions for Alternative A2 are estimated at 1,764 t CO<sub>2</sub> eq (LEI 2016b). The estimated Scope 2 GHG emissions would be reduced with the use of energy efficient equipment in the new facilities.

**Scope 3:** Scope 3 GHG emissions for Alternative A-2 are calculated at 588 t CO<sub>2</sub> eq (LEI 2016d).

Based on the GHG emissions estimates above, GHG emissions for facility operations under Alternative A-2 would total approximately 4,401 t CO<sub>2</sub> eq. This is 57 percent less than the estimate for the existing Hot Springs Campus operations and approximately 0.014 percent of the total GHG emissions for the state of South Dakota (CAIT 2016). Therefore, GHG emissions are not predicted to significantly increase under Alternative A-2, and GHG emissions are not likely to result in adverse environmental impacts such as changes in floodplains or regional water availability.

## 4.2.4 Alternative B

Alternative B would have short-term minor impacts to air quality during construction of new facilities in Rapid City and Hot Springs. In the long term, the impact to air quality from operations would be negligible as a result of operating from newer facilities designed for energy efficiency in accordance with VA CFM guidelines.

### 4.2.4.1 Impacts from Construction

The air quality impacts from construction would be the same as under Alternative A-1 except the RRTP would be built in Hot Springs, changing the location of emissions. Table 4.2-4 shows the estimated particulate emissions from construction under Alternative B.

**Table 4.2-4. Estimated Year 1 Particulate Emissions from Construction—Alternative B**

Facility	Lot size (acres)	Construction Duration (months)	Emission Factor (tons/acre/month)*	Control Efficiency (%)	Total Particulate Emissions (tons/year)
Hot Springs CBOC	5	12	1.2	80	14.4
Hot Springs RRTP	10	12	1.2	80	28.8
Rapid City MSOC	10	12	1.2	80	28.8
Total	25	12			72

\*Emission factor Section 13.2.3 "Heavy Construction Operations" (dated 1/95), of AP-42 (EPA 1995).

The estimated 28.8 tons of particulates emitted from VA's Rapid City construction would be a 0.27 percent increase in the approximately 10,800 tons per year of particulates already emitted annually in Pennington County (EPA 2015). The 43.2 tons emitted from Hot Springs construction would be a 0.93 percent increase in the approximately 4,365 tons per year of particulates already emitted in Fall River County (EPA 2015). Thus, fugitive dust emissions from construction under Alternative B would have a negligible impact on regional air quality.



#### 4.2.4.2 Impacts from Operation

The air quality impacts from Alternative B would be similar to Alternative A-1 except the RRTP is built in Hot Springs where the primary option for heat and hot water is propane. Emissions from propane combustion would be greater because propane would be required for both the CBOC and RRTP. The Rapid City MSOC would be heated with natural gas. Emissions projections are shown in Table 4.2-2.

Annual greenhouse gas (GHG) emissions attributable to operations under Alternative B were estimated similarly to the process outlined for Alternative A-1 in Section 4.2.2.2.

**Scope 1:** Scope 1 GHG emissions for Alternative B are estimated at 1,866 t CO<sub>2</sub> eq (LEI 2016a). New equipment installed at the Hot Springs and Rapid City facilities would result in increased fuel efficiencies.

**Scope 2:** Scope 2 GHG emissions for Alternative B are estimated at 1,495 t CO<sub>2</sub> eq (LEI 2016b). The estimated Scope 2 GHG emissions would be reduced with the use of energy efficient equipment in the new facilities.

**Scope 3:** Scope 3 GHG emissions for Alternative B are calculated at 747 t CO<sub>2</sub> eq (LEI 2016d).

Based on the GHG emissions estimates above, GHG emissions for facility operations under Alternative B would total approximately 4,108 t CO<sub>2</sub> eq. This is 60 percent less than the estimate for the existing Hot Springs Campus operations and approximately 0.013 percent of the total GHG emissions for the state of South Dakota (CAIT 2016). Therefore, GHG emissions are not predicted to significantly increase under Alternative B, and GHG emissions are not likely to result in adverse environmental impacts such as changes in floodplains or regional water availability.

#### 4.2.5 Alternative C

Air quality impacts from Alternative C would be similar to but less than those from Alternative B. This alternative would produce less short-term emissions from construction than either Alternative A-1, A-2 or B due to smaller areas developed for new construction. In the long term, the impact to air quality would be minor to moderate.

##### 4.2.5.1 Impacts from Construction

Construction impacts would be less than for Alternative A-1, A-2 and B because there would be no new construction in Hot Springs and only the MSOC in Rapid City. Emissions from renovations to develop the CBOC and RRTP within existing buildings at the Hot Springs Campus would be negligible on a regional scale. Estimated construction emissions from Alternative C are provided in Table 4.2-5.

**Table 4.2-5. Estimated Year 1 Particulate Emissions from Construction—Alternative C**

Facility	Lot size (acres)	Construction Duration (months)	Emission Factor (tons/acre/month)*	Control Efficiency (%)	Total Particulate Emissions (tons/year)
Rapid City MSOC	10	12	1.2	80	28.8

Facility	Lot size (acres)	Construction Duration (months)	Emission Factor (tons/acre/month)*	Control Efficiency (%)	Total Particulate Emissions (tons/year)
Total	25	12			28.8

\*Emission factor Section 13.2.3 "Heavy Construction Operations" (dated 1/95), of AP-42 (EPA 1995).

The estimated 28.8 tons of particulates emitted from VA's Rapid City construction would be a 0.27 percent increase in the approximately 10,800 tons per year of particulates already emitted annually in Pennington County (EPA 2015). Negligible particulate emissions would be associated with renovations to existing facilities in Hot Springs. Thus, fugitive dust emissions from construction under Alternative C would have a negligible impact on regional air quality.

#### 4.2.5.2 Impacts from Operation

In this alternative, the Hot Springs Campus would continue to operate, using fuel oil combustion as the heat source. Air quality impacts for the MSOC in Rapid City would be the same as Alternative A-1 (and A-2). Total emissions projections for this alternative are shown in Table 4.2-2 and are comparable to Alternative F, No Action.

Annual greenhouse gas (GHG) emissions attributable to operations under Alternative C were estimated similarly to the process outlined for Alternative A-1 in Section 4.2.2.2.

**Scope 1:** Direct GHG emissions from operations would predominantly include the consumption of natural gas and #2 fuel oil. #2 fuel oil consumption was estimated as a function of the facility size in use and the facility size in a maintenance state. Scope 1 GHG emissions for Alternative C are estimated at 2,748 t CO<sub>2</sub>eq (LEI 2016a).

**Scope 2:** Scope 2 GHG emissions for Alternative C are estimated at 2,290 t CO<sub>2</sub>eq (LEI 2016b). The estimated Scope 2 GHG emissions would be reduced with the use of energy efficient equipment in the new facilities.

**Scope 3:** Scope 3 GHG emissions for Alternative C are calculated at 747 t CO<sub>2</sub>eq (LEI 2016d).

Based on the GHG emissions estimates above, GHG emissions for facility operations under Alternative C would total approximately 5,785 t CO<sub>2</sub>eq. This is 44 percent less than the estimate for the existing Hot Springs Campus operations and approximately 0.018 percent of the total GHG emissions for the state of South Dakota (CAIT 2016). Therefore, GHG emissions are not predicted to significantly increase under Alternative C, and GHG emissions are not likely to result in adverse environmental impacts such as changes in floodplains or regional water availability.

#### 4.2.6 Alternative D

Alternative D would have short-term minor impacts to air quality during construction of new facilities in Rapid City and Hot Springs. In the long term, the impact to air quality from operations would be negligible as a result of operating from newer facilities designed for energy efficiency in accordance with VA CFM guidelines.

### 4.2.6.1 Impacts from Construction

Construction impacts would be similar to but slightly greater than for Alternative A-1, A-2 or B because two separate RRTPs would be constructed.

The total construction period for each facility would be approximately two years, with most of the site excavation and grading accomplished in the first year. Table 4.2-6 shows the estimated particulate emissions from construction under Alternative D.

**Table 4.2-6. Estimated Year 1 Particulate Emissions from Construction—Alternative D**

Facility	Lot size (acres)	Construction Duration (months)	Emission Factor (tons/acre/month)*	Control Efficiency (%)	Total Particulate Emissions (tons/year)
Hot Springs CBOC	5	12	1.2	80	14.4
Hot Springs 24-bed RRTP	6	12	1.2	80	17.3
Rapid City MSOC	10	12	1.2	80	28.8
Rapid City 76-bed RRTP	10	12	1.2	80	28.8
Total	25	12			89.3

\*Emission factor Section 13.2.3 "Heavy Construction Operations" (dated 1/95), of AP-42 (EPA 1995).

The estimated 14.4 tons of particulates emitted from VA's Rapid City construction would be a 0.063 percent increase in the approximately 23,000 tons per year of particulates already emitted annually in Pennington County. The 7.9 tons emitted from Hot Springs construction would be a 0.0089 percent increase in the approximately 89,000 tons per year of particulates already emitted in Fall River County. Thus, fugitive dust emissions from construction under Alternative D would have a negligible impact on regional air quality.

### 4.2.6.2 Impacts from Operation

The air quality impacts from Alternative D would be similar to those for Alternatives A-1, A-2 or B, with variances based on the facility location and related heating source fuel. Propane combustion would be required for both the Hot Springs CBOC and RRTP. The Rapid City MSOC and RRTP would be heated with natural gas. It is further assumed that fuel oil combustion would continue at the Hot Springs Campus in order to maintain existing facilities in an unoccupied state (assumed 30 percent of the FY 2013 fuel oil combustion rate). Emissions projections are shown in Table 4.2-2.

Annual greenhouse gas (GHG) emissions attributable to operations under Alternative D were estimated similarly to the process outlined for Alternative A-1 in Section 4.2.2.2.

**Scope 1:** Scope 1 GHG emissions for Alternative D are estimated at 1,868 t CO<sub>2</sub> eq (LEI 2016a). New equipment installed at the Hot Springs and Rapid City facilities would result in increased fuel efficiencies.

**Scope 2:** Scope 2 GHG emissions for Alternative D are estimated at 1,644 t CO<sub>2</sub> eq (LEI 2016b). The estimated Scope 2 GHG emissions would be reduced with the use of energy efficient equipment in the new facilities.

**Scope 3:** Scope 3 GHG emissions for Alternative D are calculated at 653 t CO<sub>2</sub> eq (LEI 2016d).

Based on the GHG emissions estimates above, GHG emissions for facility operations under Alternative D would total approximately 4,165 t CO<sub>2</sub> eq. This is 60 percent less than the estimate for the existing Hot Springs Campus operations and approximately 0.013 percent of the total GHG emissions for the state of South Dakota (CAIT 2016). Therefore, GHG emissions are not predicted to significantly increase under Alternative D, and GHG emissions are not likely to result in adverse environmental impacts such as changes in floodplains or regional water availability.

## 4.2.7 Alternative E

Alternative E would have short-term minor impacts to air quality during construction of potential new structure(s) on the Hot Springs Campus and of the MSOC in Rapid City. In the long term, the impact to air quality from operations would be similar to or slightly greater than those from Alternative F (No Action), due to operation from all existing facilities plus operation of new facilities on the Hot Springs Campus and in Rapid City.

### 4.2.7.1 Impacts from Construction

Note: In the absence of updated source term information on the new construction that might be required on the Hot Springs Campus, VA has retained the original analysis based on a new 82-bed RRTP, as described in Section 4.0, but recognizes that that impacts would be slightly less given that any new structure to be constructed would be somewhat smaller in size.

Emissions from renovations to develop the various facilities and improvements proposed within existing buildings on the Hot Springs Campus would be negligible on a regional scale.

Construction under Alternative E would consist of constructing an 82-bed RRTP on the Hot Springs Campus to provide the total capacity of 200 beds specified in the Save the VA proposal. Additionally, a new MSOC would be constructed in Rapid City.

Construction impacts would be less than for Alternatives A, B, or D, which also include an MSOC in Rapid City, because there would be no new RRTP construction under Alternative E and the only construction in Hot Springs would likely be on limited areas on the Hot Springs Campus. Estimated construction emissions from Alternative E are provided in Table 4.2-7.

**Table 4.2-7. Estimated Year 1 Particulate Emissions from Construction—Alternative E**

Facility	Lot size (acres)	Construction Duration (months)	Emission Factor (tons/acre/month)*	Control Efficiency (%)	Total Particulate Emissions (tons/year)
Hot Springs construction	2	12	1.2	80	5.8
Rapid City MSOC	10	12	1.2	80	28.8
Total	12	12			34.6

\*Emission factor Section 13.2.3 "Heavy Construction Operations" (dated 1/95), of AP-42 (EPA 1995).

The estimated 28.8 tons of particulates emitted from VA's Rapid City construction would be a 0.27 percent increase in the approximately 10,800 tons per year of particulates already emitted annually in Pennington County (EPA 2015). The 5.8 tons emitted from Hot Springs construction would be a 0.13 percent increase in the approximately 4,365 tons per year of particulates already emitted in Fall River County (EPA 2015). Thus, fugitive dust emissions from construction under Alternative E would have a negligible impact on regional air quality.

#### **4.2.7.2      *Impacts from Operation***

An increase in operational emissions due to expansion of services at the Hot Springs Campus would be expected. It was assumed that any building renovations/additions would be connected to the existing fuel oil heating system, and fuel oil consumption would occur at the current rate (gallons per year per building square foot) scaled for the projected increase in facility size. The estimated emissions are presented in Table 4.2-2.

Annual greenhouse gas (GHG) emissions attributable to operations under Alternative E were estimated similarly to the process outlined for Alternative A-1 in Section 4.2.2.2.

**Scope 1:** Direct GHG emissions from operations would predominantly include the consumption of #2 fuel oil. Scope 1 GHG emissions for Alternative E are estimated at 5,964 t CO<sub>2</sub> eq (LEI 2016a).

**Scope 2:** Scope 2 GHG emissions for Alternative E are estimated at 6,160 t CO<sub>2</sub> eq (LEI 2016b). The estimated Scope 2 GHG emissions would be reduced with the use of energy efficient equipment in the new/renovated facilities.

**Scope 3:** Scope 3 GHG emissions for Alternative E are calculated at 1,988 t CO<sub>2</sub> eq (LEI 2016d).

Based on the GHG emissions estimates above, GHG emissions for facility operations under Alternative E would total approximately 13,112 t CO<sub>2</sub> eq. This is 37 percent more than the estimate for the existing Hot Springs Campus operations and approximately 0.045 percent of the total GHG emissions for the state of South Dakota (CAIT 2016). Therefore, GHG emissions are not predicted to significantly increase under Alternative E, and GHG emissions are not likely to result in adverse environmental impacts such as changes in floodplains or regional water availability.

#### **4.2.8      *Alternative F***

Alternative F would have no construction air quality impacts, as there would be no construction.

Emissions from facility heating (fuel oil combustion) and other operations would continue at levels shown in Table 4.2-2.

Annual greenhouse gas emissions would continue at levels estimated in Section 3.2.2.3.2.



## **4.2.9 Supplemental Alternative G**

### **4.2.9.1 *Impacts from Construction***

Under Alternative G, some or all of the existing facilities at the Hot Springs Campus would be re-used by other tenants. Depending on the intended use, some facility renovation may be required. Air quality construction impacts would be minimal as facilities would largely be repurposed and building renovations would not disturb significant areas. Air quality impacts from construction would likely be similar to Alternatives C, E, or F, depending on the extent of renovation or construction.

### **4.2.9.2 *Impacts from Operation***

Air quality impacts attributable to re-use of Hot Springs Campus facilities by other tenants would be similar to those for Alternatives C, E, and F, depending on the re-use. It is assumed that occupied facilities would continue to be heated using the existing fuel oil combustion system, and unoccupied facilities would be heated only to maintain them in an unoccupied state. Actual emissions estimated, including GHG emissions, would depend on the extent and conditions of facility reutilization.

## 4.3 Cultural Resources and Historic Properties

### 4.3.1 Evaluation Criteria

The CEQ regulations implementing NEPA provide the basis for evaluating the context and intensity of impacts to historic properties listed in or eligible for listing in the NRHP or the degree to which it may cause loss or destruction of significant cultural resources (40 CFR 1508.27(b)(8)). The Section 106 regulations at 36 CFR 800.16 define an effect as, “alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register [NRHP].” An adverse effect is an action that may directly or indirectly alter a characteristic that qualifies a property for inclusion in the NRHP in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association (36 CFR 800.5(a)(1)). An impact would be beneficial if the action results in the preservation of historic properties and their character.

### 4.3.2 Assessment Methodology

The assessment methodology for identifying potential effects is separated into “on-campus” and “off-campus” actions. On-campus actions include vacating the campus (and relocating health care services to other locations) or renovating campus buildings, whereas off-campus actions focus on development (new construction or modifications to existing buildings) at different locations in Hot Springs and/or Rapid City.

Potential direct and indirect effects on historic properties were identified in consultation by VA BHHCS and consulting parties. Figures 4.3-1 and 4.3-2 diagram the assessment methodology effects related to on-campus and off-campus actions. In keeping with this assessment methodology, the presentation of impacts by alternative differs from the other resources, where impacts are presented as they relate to construction and operation.

## On Campus Actions/Effects

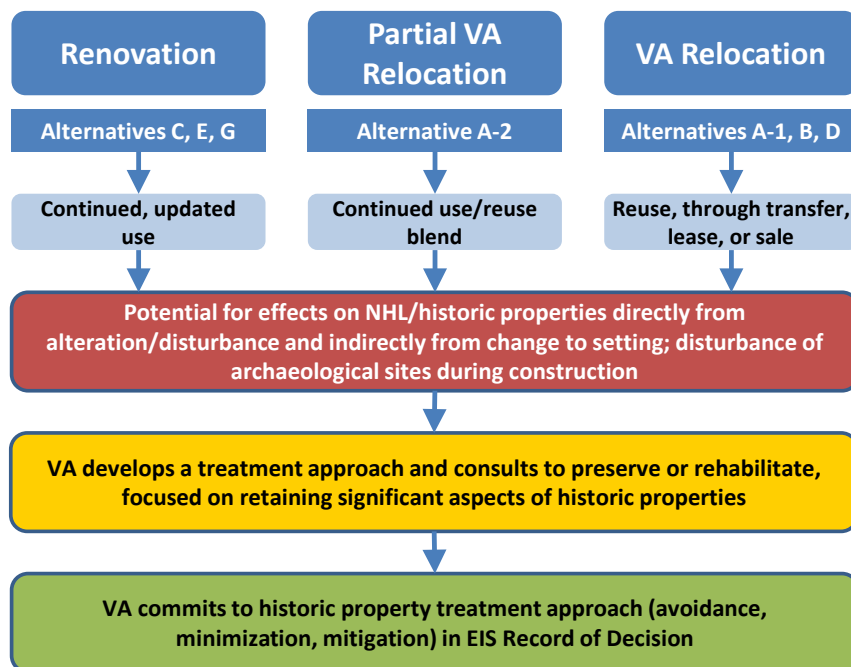


Figure 4.3-1. Assessment Methodology for On-Campus Actions and Effects.

## Off Campus Actions/Effects

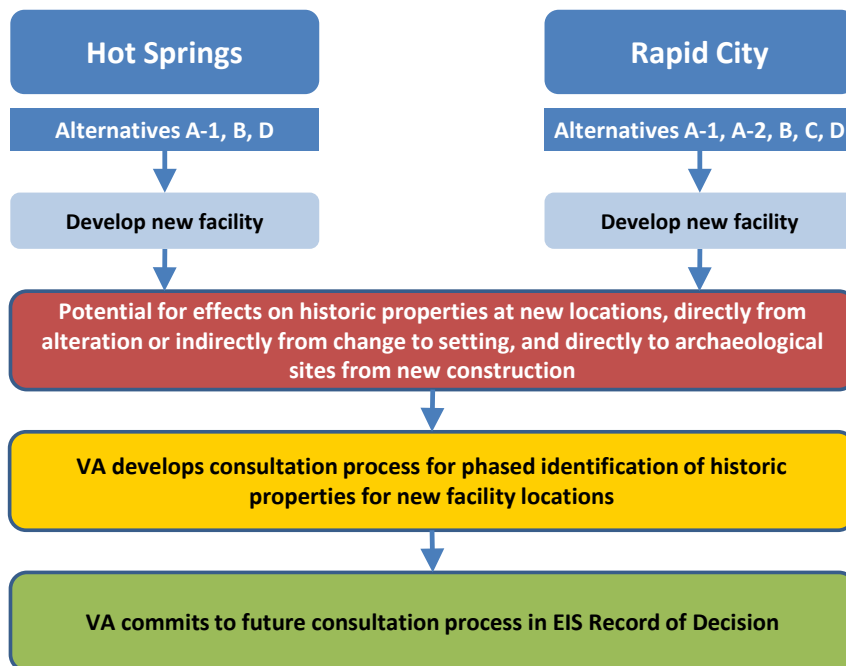


Figure 4.3-2. Assessment Methodology for Off-Campus Actions and Effects.

#### **4.3.2.1      *Types of Effects on Historic Properties and Other Cultural Resources***

An effect is an alteration to the characteristics of a historic property qualifying it for the NRHP (36 CFR 800.16). As with other environmental resources (see Section 4.0), a direct effect is caused by the action and occurs at the same time and place as the action (40 CFR 1508.8(a)), whereas an indirect effect is caused by the action and is later in time or farther removed in distance, but is still reasonably foreseeable (40 CFR 1508.8(b)).

Direct effects relate predominantly to the physical structure of the historic property or cultural resource:

- The Battle Mountain Sanitarium National Historic Landmark (NHL) and its contributing resources (buildings and features) could be directly affected by physical modification, change in use, change in maintenance or upkeep of the buildings and campus, or other alteration.
- The Hot Springs Historic District could be directly affected by any direct effects to the NHL, which is a contributing resource to the Historic District.
- The Battle Mountain traditional use area, or features or components of this area, could be directly affected if ground disturbance alters archaeological or cultural materials considered by Native American tribes to be associated with the traditional importance of the area.
- Mothballing is a direct effect to historic buildings.
- Other archaeological sites, historic building locations, or historic districts (identified during phased review (36 CFR 800.4(b)(2))) could be directly affected if relocated services occupy or change the use of buildings that are listed in or eligible for listing in the NRHP, renovate/modify historic resources, and/or if ground disturbance alters or results in unexpected discovery of archaeological or cultural materials.

Indirect effects can be either temporary or permanent, and relate predominantly to important aspects of historic setting, feeling, and association where these aspects are integral to conveying the character of historic properties:

- The Battle Mountain Sanitarium NHL and its contributing resources, including the National Cemetery, could be indirectly affected if physical modifications or changes in use create substantial new contrasts to the historic setting of the NHL or alter its historic feeling and association.
- The Battle Mountain Sanitarium NHL and its contributing resources, including the National Cemetery, could be indirectly affected if changes in use involve the complete or substantial removal of health care services, removal of Veteran presence and use, and/or removal of Veteran health care provision.
- The Hot Springs Historic District could be indirectly affected if substantial new contrasts are readily perceptible from the Historic District contributing resources or alter its historic feeling and association. Perceptible contrasts could include visible, audible, or atmospheric modifications at the NHL, which is located at an elevated position to the rest of the Historic District, or new construction in the Hot Springs area located within line of sight from the Historic District. Additionally, the Hot Springs Historic District could be indirectly affected

if the primary use of the Battle Mountain Sanitarium NHL no longer includes health care or if the primary campus use is not related to Veteran services.

- The Battle Mountain traditional use area could be indirectly affected if substantial new contrasts are readily perceptible from traditional use places that retain their historic setting (natural environment of the Battle Mountain landform intact and undeveloped), or retain associated cultural features of traditional concern. Perceptible contrasts could include visible, audible, or atmospheric modifications at the NHL or a new construction location in the Hot Springs area.
- Other historic properties (identified during phased review (36 CFR 800.4(b)(2)) could be indirectly affected if buildings to support relocated services are readily perceptible (such as in line of sight) and create any substantial new contrasts to the historic setting, feeling, or association of these properties, either temporarily, such as during a construction phase, or permanently.

#### **4.3.2.2 Types of Adverse Effects on Historic Properties**

An adverse effect is an alteration that diminishes the integrity of the location, design, setting, materials, workmanship, feeling, or association of a historic property. Adverse effects may include reasonably foreseeable effects caused by the action that may occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5(a)(1)). Examples of adverse effects include:

- Physical destruction of or damage to all or part of the property
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary's *Standards for the Treatment of Historic Properties* (36 CFR 68) and applicable guidelines
- Removal of the property from its historic location
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features
- Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to any Native American tribes
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance (30 CFR 800.5(a)(2))

The potential effects of the proposed on-campus and off-campus actions were analyzed against the criteria of adverse effects and compared to the examples above to determine if the impacts of the alternatives would adversely affect historic properties.



### **4.3.3 Alternative A-1**

#### **4.3.3.1 Impacts from On-Campus Actions**

The on-campus actions of Alternative A-1 would involve relocating health care services to other locations and vacating the VA Hot Springs Campus including the Battle Mountain Sanitarium NHL. VA BHHCS would maintain campus buildings and features in use during the transition to new facilities. VA BHHCS would implement the long-term preservation plan described in Section 5.2 in the event buildings will be unoccupied for a period longer than three months. This plan is designed to minimize adverse effects to the buildings and campus. Maintenance of the National Cemetery would continue. These effects are not anticipated to necessitate removal of the Battle Mountain Sanitarium NHL contributing element from the Hot Springs Historic District.

VA BHHCS would no longer offer health care services at the campus, which would diminish the character of the property's use (i.e. the integrity of association and feeling) that contributes to its historic significance. This adverse effect could be permanent depending on future re-use of the campus. Re-use would be a permanent effect from VA BHHCS vacating the campus, and is assessed as Supplemental Alternative G.

Long-term preservation of the campus would not disturb archaeological deposits, unless implementation of the preservation plan requires significant modification to utilities or building foundations. VA BHHCS would consult with the SD SHPO and Native American tribes with cultural and/or geographic affiliations to the Black Hills prior to ground disturbance.

#### **4.3.3.2 Impacts from Off-Campus Actions**

The off-campus actions under Alternative A-1 would involve new construction or redevelopment/renovation of facilities in the Hot Springs area for a CBOC and in the Rapid City area for an MSOC and 100-bed RRTP. VA BHHCS has not yet identified specific locations for these facilities.

Regardless of the size and specific location that could be selected, the potential exists for impacts on historic properties and cultural resources. The locations would be in the Black Hills, which have received millennia of human use and occupancy. Lands anywhere in the region have the potential to reflect this lengthy heritage in the form of prehistoric archaeological vestiges and Native American cultural materials and features, as well as in the historic debris and remnants of development following the nineteenth century establishment of Hot Springs and Rapid City. Ground-disturbing activities could encounter archaeological and cultural materials that could be impacted by physical damage or removal from their historic location. These could be permanent adverse effects. The measures to resolve adverse effects in Section 5.2 are designed to address adverse effects to archaeological resources.

A location that best meets the selection criteria (see Section 2.3) could require new construction, involve redeveloping non-historic buildings, or involve redeveloping historic buildings pursuant to Executive Order 13006, Locating Federal Facilities on Historic Properties in Our Nation's Central Cities. Alterations to historic buildings, structures or landscapes to accommodate health care services could result in adverse effects. Historic buildings or districts could be present in the surroundings of a selected location and could be indirectly affected by introduction of visual, atmospheric, or audible elements by the new development. This could be an adverse effect if the new development diminishes the integrity of significant historic features such as setting, or design. The effect could be

temporary during construction or permanent upon completion of construction. If a proposed location is in the viewshed of a historic property, potential effects would be resolved during phased evaluation and subsequent consultation.

New locations for a CBOC in Hot Springs and an MSOC and RRTP in Rapid City would be subject to a phased review to identify and evaluate historic properties (36 CFR 800.4(b)(2)). Any discovery of cultural resources and historic properties during the phased review would be addressed following the commitments stated in the record of decision (36 CFR 800.13(a)(2)). Discoveries of human burial remains on federal land would be addressed according to the *Native American Graves Protection and Repatriation Act*, and on non-federal lands according to State of South Dakota Statutes, Chapter 34-27-25.

## **4.3.4 Alternative A-2**

### **4.3.4.1 Impacts from On-Campus Actions**

Under Alternative A-2, VA BHHCS would retain Building 12 for use as a CBOC. VA BHHCS would remove all other services from the VA Hot Springs Campus and open a new RRTP in Rapid City. VA would redevelop Building 12, a contributing element to the Battle Mountain Sanitarium NHL, through a series of construction projects that may alter the exterior appearance of the building and would change the interior space. These changes would be undertaken in accordance with the measures to resolve adverse effects described in Section 5.2. These measures are designed to minimize the effects of redevelopment of Building 12 on the Battle Mountain Sanitarium NHL and the Hot Springs Historic District. It is not anticipated that exterior changes to Building 12 would necessitate removal of Building 12 from the Battle Mountain NHL, nor removal of the Battle Mountain NHL from the Hot Springs Historic District. NCA would continue to maintain the National Cemetery.

Alternative A-2 retains a VA presence on the VA Hot Springs Campus, thereby minimizing a change of use, and the adverse effect to integrity of association and feeling. All other campus buildings would be maintained during the transition of services. Buildings that would be unoccupied for more than three months would be subject to the long-term preservation plan described in Section 5.2. If VA chose to implement Supplemental Alternative G, the remainder of the campus would be evaluated for re-use by VA and, if that option was not fruitful, marketed in accordance with the marketing strategy described in Section 5.2. The effects of re-use under Supplemental Alternative G are summarized in 4.3.10.

Alteration of Building 12 may require ground disturbing construction actions that have the potential to affect archaeological resources. VA BHHCS would proceed in accordance with the measures described in Section 5.2 to identify and evaluate potential subsurface deposits and avoid or minimize effects. Long-term preservation of the campus would not disturb archaeological deposits, unless implementation of the preservation plan requires significant modification to utilities or building foundations. VA BHHCS would consult with the SD SHPO and Native American tribes with cultural and/or geographic affiliations to the Black Hills prior to ground disturbance.

#### **4.3.4.2      *Impacts from Off-Campus Actions***

The off-campus actions under Alternative A-2 would involve new construction or redevelopment/renovation of facilities in the Rapid City area for an MSOC and 100-bed RRTP. VA BHHCS has not yet identified specific locations for these facilities.

The effects of this development would be identical to the effects in Rapid City described in Section 4.3.3.2 Impacts of Off-Campus Actions of Alternative A-1.

### **4.3.5      *Alternative B***

#### **4.3.5.1      *Impacts from On-Campus Actions***

The on-campus actions under Alternative B would involve relocating health care services to other locations and vacating the VA Hot Springs Campus including the Battle Mountain Sanitarium NHL. VA BHHCS would continue to maintain the campus pending transition to a future re-use. Maintenance of the National Cemetery would continue. The impacts on cultural resources and historic properties from vacating the VA Hot Springs Campus would be the same as described for Alternative A-1.

#### **4.3.5.2      *Impacts from Off-Campus Actions***

The off-campus actions under Alternative B would involve new construction or redevelopment/renovation of facilities in the Hot Springs area for a CBOC and 100-bed RRTP, and in the Rapid City area for an MSOC. VA BHHCS has not yet identified specific locations in either city. Although the construction footprints would not be the same in the Hot Springs and Rapid City areas because of the specific facilities proposed in each city, the difference would be too minimal to identify a substantial difference between the cities in the potential for impacts to archaeological sites or historic buildings. Thus, the likelihood of encountering cultural resources or affecting historic properties would be similar in both cities, in the absence of specific locations being identified. The process for selecting locations in the Hot Springs and Rapid City areas would be the same, and the types of effects to cultural resources and historic properties would be similar to the impacts described for Alternative A.

### **4.3.6      *Alternative C***

#### **4.3.6.1      *Impacts from On-Campus Actions***

The on-campus actions under Alternative C would involve interior renovations and modifications to Building 12 and the domiciliary (Buildings 1 through 8 and 11) to continue partial operation of the VA Hot Springs Campus as a medical facility for Veterans. This continuation would retain the character of the property's historic use, which would be beneficial to maintaining the integrity of the historic property. Accessibility standards could be met by modifications to the campus buildings; the effects of these actions would be avoided or minimized through application of the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. Visual, atmospheric, or audible elements of construction activities and equipment would not likely diminish the integrity of the property and would be temporary.

Buildings not needed for providing health care services would be vacated. VA BHHCS would continue to use buildings in the transition. VA BHHCS has committed to the long-term

preservation of buildings that would be unoccupied for more than 3 months (see Section 5.2). Transfer of the property out of federal ownership or control would not likely occur under Alternative C; however, leasing parts of the VA Hot Springs Campus not needed by VA BHHCS could occur, with similar effects to the NHL as described for Supplemental Alternative G.

#### **4.3.6.2      *Impacts from Off-Campus Actions***

The off-campus actions under Alternative C would involve new construction or redevelopment/renovation of existing facilities in the Rapid City area for an MSOC; however, VA BHHCS has not yet identified a specific location. The potential effects of development to cultural resources and historic properties in the Rapid City area would be the same as described for Alternative A-1.

### **4.3.7      *Alternative D***

#### **4.3.7.1      *Impacts from On-Campus Actions***

The on-campus actions under Alternative D would involve relocating health care services to other locations and vacating the VA Hot Springs Campus including the Battle Mountain Sanitarium NHL. VA BHHCS would continue to maintain the campus pending transition to a future re-use. Maintenance of the National Cemetery would continue. The impacts on cultural resources and historic properties from vacating the VA Hot Springs Campus would be the same as described for Alternative A-1.

#### **4.3.7.2      *Impacts from Off-Campus Actions***

The off-campus actions under Alternative D would involve new construction or redevelopment/renovation of facilities in the Hot Springs area for a CBOC and 24-bed RRTP, and in the Rapid City area for an MSOC and 76-bed RRTP. VA BHHCS has not yet identified specific locations in either city. The likelihood of encountering cultural resources or affecting historic properties would be similar in both cities, in the absence of specific locations being identified. The process for selecting locations would be the same, and the types of effects to cultural resources and historic properties would be similar to the impacts described for Alternative A-1.

### **4.3.8      *Alternative E***

#### **4.3.8.1      *Impacts from On-Campus Actions***

The on-campus actions under Alternative E would involve interior and exterior renovations and modifications to numerous buildings to expand health care operations and address accessibility and barrier-free standards, and new construction of buildings to accommodate additional RRTP beds and housing, as described in Section 2.3.5. The VA Hot Springs Campus, including the NHL, would continue to operate as a medical facility for Veterans. This continuation would retain the character of the property's historic use, which would be beneficial to maintaining the integrity of the historic property.

The impacts of retaining and expanding health care operations on the VA Hot Springs Campus would be similar to the impacts described for Alternative C. VA BHHCS has developed measures (described in Section 5.2) to avoid and/or minimize the effects of alterations to the campus buildings and features by committing to application of the Secretary of the Interior's *Treatment of Historic Properties*.

Visual, atmospheric, or audible elements of construction activities and equipment would not likely diminish the integrity of the property and would be removed after construction is completed, so any effect would be temporary. Ground-disturbing activities could encounter archaeological and cultural materials that could be impacted by physical damage or removal from their historic location. These could be permanent adverse effects. However, mitigation and minimization measures identified in Chapter 5 would avoid and/or minimize adverse effects to archaeological resources.

Any new construction for (e.g., for storage or additional housing) near the domiciliary or staff quarters could affect the integrity of the historic setting, feeling, and association of the property. Construction could indirectly adversely affect the Hot Springs Historic District or Hot Springs/Battle Mountain traditional use area if it creates a substantial contrast that diminishes the integrity of their significant historic features. VA BHHCS would seek to avoid or minimize these effects through the measures described in Section 5.2.

#### **4.3.8.2      *Impacts from Off-Campus Actions***

The off-campus actions under Alternative E would be the continuation of health care operations at the leased CBOC in Rapid City. If space is leased in a different location for a CBOC upon the expiration of the current lease, the process for selecting the location and the types of effects to cultural resources and historic properties would be similar to those described for Alternative A as it relates to Rapid City.

### **4.3.9          *Alternative F***

#### **4.3.9.1      *Impacts from On-Campus Actions***

The on-campus actions under Alternative F would involve continued management and operation of the VA Hot Springs Campus as a medical facility for Veterans. This continuation would retain the character of the property's historic use, which would be beneficial to maintaining the integrity of the historic property. Upgrades and renovations to buildings to maintain clinical standards would be initiated as funding became available. The effects to the property would be similar to the impacts described for Alternative C.

#### **4.3.9.2      *Impacts from Off-Campus Actions***

The off-campus actions under Alternative F would be the continuation of operations at the leased CBOC in Rapid City. If space is leased in a different location for a CBOC upon the expiration of the current lease, the process for selecting the location and the types of effects to cultural resources and historic properties would be similar to those described for Alternative A as it relates to Rapid City.

### **4.3.10        *Supplemental Alternative G***

#### **4.3.10.1     *Impacts from On-Campus Actions***

Supplemental Alternative G may be applied to Alternatives A-1, A-2, B, C, or D. The on-campus actions under Supplemental Alternative G would involve relocating health care services to other locations and vacating all or portions of the VA Hot Springs Campus including the Battle Mountain Sanitarium NHL. VA BHHCS would continue to maintain the campus pending transition to a future re-use. Maintenance of the National Cemetery would continue. The potential for effects to cultural resources and historic properties would depend on the selected re-use, but impacts may



include physical alteration of the campus buildings and features, change in use, and/or a transfer out of federal control.

If VA chooses to vacate all or a portion of the VA BHHCS, VA first will seek new uses for the Hot Springs VA Campus in other VA departments. Re-use by another VA department would minimize, but not avoid, as adverse effect related to change of use. VA would be subject to the measures to resolve adverse effects described in Section 5.2.2 and the NHPA to redevelop the campus.

Re-use of the VA Hot Springs Campus by a non-VA entity would result in the transfer of ownership or change of occupant. This change of use would constitute an adverse effect. The measures ) committed to by VA BHHCS to resolve adverse effects (see Section 5.2) seek to minimize the effects of long-term preservation. Any entity taking over use or possession that may involve change(s) to the facility would be required to comply with all mitigation, minimization, monitoring, and best practices identified in the ROD if VA BHHCS determines it will implement Supplemental Alternative G.

Alterations, modifications, or other activities to support re-use could affect the integrity of the historic properties. The historic setting, feeling, and association of the NHL, Hot Springs Historic District, and the Hot Springs/Battle Mountain traditional use area could be affected. Ground disturbance could affect archaeological or cultural materials (prehistoric and historic) on the property. These actions could have adverse effects on the property and NHL if inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (NPS 1995). The measures to resolve adverse effects described in Section 5.2 are designed to avoid, minimize, and/or mitigate the potential effects of actions affecting the integrity of historic properties. These measures will apply if the entire campus is redeveloped or if redevelopment is limited to select buildings or areas of the VA Hot Springs Campus.

Occupancy of the campus by an entity other than VA BHHCS would avoid having to maintain the buildings to the terms of the long-term preservation plan for an extended period.

VA BHHCS has committed to maintaining unoccupied VA Hot Springs Campus buildings for at least five years and may choose to renew the long-term preservation plan for five additional years. If a redevelopment partner has not been identified at the expiration of the long-term preservation plan, VA BHHCS would re-enter into consultation pursuant to Section 106 of the NHPA and its implementing regulations (36 CFR 800) regarding the VA Hot Springs Campus.

#### ***4.3.10.2 Impacts from Off-Campus Actions***

There are no anticipated off-campus actions specific to Supplemental Alternative G.

## 4.4 Geology and Soils

### 4.4.1 Evaluation Criteria

The potential effects related to geology and soils were evaluated through a qualitative assessment of geologic hazards and the potential for severe erosion or liquefaction, including both construction- and operation-related activities. An alternative would be considered to result in an adverse impact related to geology and soils if it would result in any of the following effects:

- expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking, or seismic-related ground failure, including liquefaction or landslides
- be located on a geologic unit or soil that is unstable or would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse
- be located on expansive soil creating substantial risks to life or property

### 4.4.2 Alternative A-1

#### 4.4.2.1 Impacts from Construction

Under Alternative A-1, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Approximately 5 acres could be disturbed in Hot Springs and approximately 17 acres could be disturbed in Rapid City. Locations for the proposed facilities have not yet been selected. Exposed soils would be susceptible to erosion from wind and stormwater runoff from the construction sites. Cut and fill actions in areas of severe sloping would be limited to those necessary to reduce erosion potential. Soils generated during excavation would be reutilized in areas requiring fill material or transported offsite. Site topography is not anticipated to be substantially altered. Drainage changes resulting from changes to site topography are anticipated to be minimal and would be monitored for erosion potential through routine site stormwater management practices. Wind erosion could temporarily increase airborne particulate matter in the area, resulting in short-term health, visibility, and aesthetics impacts. Temporary increases in sedimentation in stormwater drainages could occur as a result of surface runoff erosion.

Development of a new facility location could impact prime, unique, statewide, or local important farmlands protected by the *Farmland Protection Policy Act*. Upon identification of a site for new construction, a Farmland Conversion Impact Rating form (Form AD-1006) would be completed by VA and submitted to the local National Resources Conservation Service office for a determination of whether the site contains prime, unique, statewide, or local important farmland and the level of impacts.

A general stormwater permit from the SDDENR would be required because the construction activities would disturb one or more acres of land. Development of a Stormwater Pollution Prevention Plan is required, consistent with the National Pollutant Discharge Elimination System (NPDES) general permit.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements. These minimization opportunities are described in Chapter 5.

#### **4.4.2.2      *Impacts from Operation***

Operation of the proposed new facilities is not expected to result in adverse impacts to geology and soils. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and the resulting erosion potential.

### **4.4.3      *Alternative A-2***

#### **4.4.3.1      *Impacts from Construction***

Under Alternative A-2, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Soil disturbance from building renovation activities would be minimal. Approximately 17 acres could be disturbed in Rapid City. The potential impacts from construction and regulatory compliance requirements are the same as those described for Alternative A-1 as adjusted for the differences in affected acreage.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements, as described in Chapter 5.

#### **4.4.3.2      *Impacts from Operation***

Operation of the potential facilities is not expected to result in adverse impacts to geology and soils. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and the resulting erosion potential.

### **4.4.4      *Alternative B***

#### **4.4.4.1      *Impacts from Construction***

Under Alternative B, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Approximately 15 acres could be disturbed in Hot Springs and approximately 10 acres could be disturbed in Rapid City. Locations for the potential facilities have not yet been selected. The potential impacts from construction and regulatory compliance requirements would be the same as those described for Alternative A-1 as adjusted for the differences in affected acreage.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements, as described in Chapter 5.

#### **4.4.4.2      *Impacts from Operation***

Operation of the potential facilities is not expected to result in adverse impacts to geology and soils. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and the resulting erosion potential.

### **4.4.5      *Alternative C***

#### **4.4.5.1      *Impacts from Construction***

Under Alternative C, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Soil disturbance from building renovation activities would be minimal. Approximately 10 acres could be disturbed in Rapid City. The potential impacts from construction and regulatory compliance requirements are the same as those described for Alternative A-1 as adjusted for the differences in affected acreage and limited to Rapid City only under Alternative C.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements, as described in Chapter 5.

#### **4.4.5.2      *Impacts from Operation***

Operation of the facilities is not expected to result in adverse impacts to geology and soils. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and the resulting erosion potential.

### **4.4.6      *Alternative D***

#### **4.4.6.1      *Impacts from Construction***

Under Alternative D, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Approximately 13 acres could be disturbed in Hot Springs and approximately 17 acres could be disturbed in Rapid City. The potential impacts from construction and regulatory compliance requirements are the same as those described for Alternative A as adjusted for the differences in affected acreage.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements, as described in Chapter 5.

#### **4.4.6.2      *Impacts from Operation***

Operation of the potential facilities is not expected to result in adverse impacts to geology and soils. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and the resulting erosion potential.

## **4.4.7 Alternative E**

### **4.4.7.1 Impacts from Construction**

Under Alternative E, construction activities associated with the renovation of existing facilities at the Hot Springs Campus would occur. Less than two acres could be disturbed due to new construction on the campus. Soil disturbance from building renovation activities would be minimal. Exposed soils would be susceptible to erosion from wind and stormwater runoff from the construction site. Soils generated during excavation would be reutilized in areas requiring fill material or transported offsite. Site topography is not anticipated to be substantially altered. Drainage changes resulting from changes to site topography are anticipated to be minimal and would be monitored for erosion potential through routine site stormwater management practices. Wind erosion could temporarily increase airborne particulate matter in the area, resulting in short-term health, visibility, and aesthetics impacts. Temporary increases in sedimentation in stormwater drainages could occur as a result of surface runoff erosion.

Depending on the size of the campus location(s) selected for any new construction (e.g., storage, housing), a general stormwater permit from the SDDENR could be required if the construction activities would disturb one or more acres of land. Development of a Stormwater Pollution Prevention Plan would also be required, consistent with the NPDES general permit.

Approximately 10 acres could be disturbed in Rapid City for the new MSOC. A location for the potential facility has not yet been selected. The potential impacts from construction and regulatory compliance requirements would be the same as those described for Alternative A-1 as adjusted for the differences in affected acreage.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices, as described in Chapter 5.

### **4.4.7.2 Impacts from Operation**

Operation of the potential facilities is not expected to result in adverse impacts to geology and soils. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and the resulting erosion potential.

## **4.4.8 Alternative F**

### **4.4.8.1 Impacts from Construction**

Under Alternative F, only renovation of existing facilities at the Hot Springs Campus provided for in annual budgets would occur. Soil disturbance from building renovation activities would be minimal. Exposed soils would be susceptible to erosion from wind and stormwater runoff from the construction site. Wind erosion could temporarily increase airborne particulate matter in the area, resulting in short-term health, visibility, and aesthetics impacts. Temporary increases in sedimentation in stormwater drainages could occur as a result of surface runoff erosion.



Construction-related impacts, if any, would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices, as described in Chapter 5.

#### **4.4.8.2      *Impacts from Operation***

Continued operation of the facilities at Hot Springs and operation of the MSOC in Rapid City is not expected to result in adverse impacts to geology and soils. Landscape vegetation would be maintained, thereby minimizing exposed soils and the resulting erosion potential.

### **4.4.9      Supplemental Alternative G**

#### **4.4.9.1      *Impacts from Construction***

Under Supplemental Alternative G, depending on the intended use, some facility renovation may be required, but construction of facilities would not be expected to exceed that described for Alternative E. The potential impacts from construction and regulatory compliance requirements would be similar to those of Alternative E if there was a small amount of construction or Alternative F if there was none.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices, as described in Chapter 5.

#### **4.4.9.2      *Impacts from Operation***

Operation of some or all of the Hot Springs Campus facilities by a new tenant is not expected to result in adverse impacts to geology and soils. For construction of any new building, landscape vegetation would be maintained, thereby minimizing exposed soils and the resulting erosion potential.

## 4.5 Hydrology and Water Quality

### 4.5.1 Evaluation Criteria

The potential effects related to hydrology and water quality were evaluated through a qualitative assessment of potential project-related drainage alterations, increased impervious areas, water quality degradation, or groundwater depletion, including both construction- and operation-related activities. An alternative would be considered to result in an adverse impact related to hydrology and water quality if it would result in any of the following effects:

- violate existing water quality standards or otherwise substantially degrade water quality
- result in substantial water quality changes that would adversely affect beneficial uses
- result in substantive groundwater depletion

### 4.5.2 Alternative A-1

#### 4.5.2.1 *Impacts from Construction*

Under Alternative A-1, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Approximately 5 acres could be disturbed in Hot Springs and approximately 17 acres could be disturbed in Rapid City. Locations for the new facilities have not yet been selected. Exposed soils would be susceptible to erosion from stormwater runoff from the construction sites. Drainage changes resulting from changes to site topography and installation of impervious surfaces are anticipated to be minimal and would be monitored for erosion potential through routine site stormwater management practices. Temporary increases in sedimentation in stormwater drainages could occur as a result of surface runoff erosion.

A general stormwater permit from the SDDENR must be obtained because the construction activities would disturb one or more acres of land. Development of a Stormwater Pollution Prevention Plan is required, consistent with the NPDES general permit.

The use of construction materials and generation of construction wastes could increase the potential for stormwater contamination that could adversely affect water quality. Additionally, spills or leaks from construction equipment could adversely affect water quality if allowed to enter surface waters.

Groundwater resources are not anticipated to be used nor measurably affected by construction activities.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements, as described in Chapter 5.

#### 4.5.2.2 *Impacts from Operation*

Operation of the proposed new facilities is not expected to result in adverse impacts to hydrology and water quality. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the municipal wastewater treatment plant in either city of operation.

### **4.5.3        Alternative A-2**

#### **4.5.3.1        *Impacts from Construction***

Under Alternative A-2, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Soil disturbance from building renovation activities would be minimal. Approximately 17 acres could be disturbed in Rapid City. A location for the potential new facility in Rapid City has not yet been selected. The potential impacts from construction and regulatory compliance requirements are the same as those described for Alternative A-1 as adjusted for the differences in affected acreage.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements, as described in Chapter 5.

#### **4.5.3.2        *Impacts from Operation***

Operation of the facilities is not expected to result in adverse impacts to hydrology and water quality. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the municipal wastewater treatment plant in either city of operation.

### **4.5.4        Alternative B**

#### **4.5.4.1        *Impacts from Construction***

Under Alternative B, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Approximately 15 acres could be disturbed in Hot Springs and approximately 10 acres could be disturbed in Rapid City. Locations for the new facilities have not yet been selected. The potential impacts from construction and regulatory compliance requirements are the same as those described for Alternative A-1 as adjusted for the differences in affected acreage.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements, as described in Chapter 5.

#### **4.5.4.2        *Impacts from Operation***

Operation of the new facilities is not expected to result in adverse impacts to hydrology and water quality. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the municipal wastewater treatment plant in either city of operation.

## **4.5.5 Alternative C**

### **4.5.5.1 Impacts from Construction**

Under Alternative C, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Soil disturbance from building renovation activities would be minimal. Approximately 10 acres could be disturbed in Rapid City. A location for the potential new facility in Rapid City has not yet been selected. The potential impacts from construction and regulatory compliance requirements are the same as those described for Alternative A-1 as adjusted for the differences in affected acreage and limited to Rapid City only under Alternative C.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements, as described in Chapter 5.

### **4.5.5.2 Impacts from Operation**

Operation of the facilities is not expected to result in adverse impacts to hydrology and water quality. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the municipal wastewater treatment plant in either city of operation.

## **4.5.6 Alternative D**

### **4.5.6.1 Impacts from Construction**

Under Alternative D, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Approximately 13 acres could be disturbed in Hot Springs and approximately 17 acres could be disturbed in Rapid City. Locations for the potential new facilities have not yet been selected. The potential impacts from construction and regulatory compliance requirements are the same as those described for Alternative A-1 as adjusted for the differences in affected acreage.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements as described in Section 5.5.

### **4.5.6.2 Impacts from Operation**

Operation of the new facilities is not expected to result in adverse impacts to hydrology and water quality. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the municipal wastewater treatment plant in either city of operation.

## **4.5.7 Alternative E**

### **4.5.7.1 Impacts from Construction**

Under Alternative E, construction activities associated with the renovation of existing facilities at the Hot Springs Campus would occur. Less than two acres could be disturbed due to new construction on the campus. Soil disturbance from building renovation activities would be minimal. Exposed soils would be susceptible to erosion from stormwater runoff from the construction site. Site topography is not anticipated to be substantially altered. Drainage changes resulting from changes to site topography are anticipated to be minimal and would be monitored for erosion potential through routine site stormwater management practices. Temporary increases in sedimentation in stormwater drainages could occur as a result of surface runoff erosion.

The use of construction materials and generation of construction wastes could increase the potential for stormwater contamination that could adversely affect water quality. Additionally, spills or leaks from construction equipment could adversely affect water quality if allowed to enter surface waters..

Depending on the size of the campus location(s) selected for any additional new construction (e.g., storage, housing), a general stormwater permit from the SDDENR could be required if the construction activities would disturb one or more acres of land. Development of a Stormwater Pollution Prevention Plan would also be required, consistent with the NPDES general permit.

Groundwater resources are not anticipated to be used nor measurably affected by renovation activities.

Construction activities for the MSOC in Rapid City would include site grading and preparation, which would disturb exposed subsurface soils. Approximately 10 acres could be disturbed in Rapid City. A location for the new facility has not yet been selected. The potential impacts from construction and regulatory compliance requirements are the same as those described for Alternative A-1 as adjusted for the differences in affected acreage.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices, as described in Chapter 5.

### **4.5.7.2 Impacts from Operation**

Operation of the facilities is not expected to result in adverse impacts to hydrology and water quality. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the municipal wastewater treatment plant in either city of operation.

## **4.5.8 Alternative F**

### **4.5.8.1 Impacts from Construction**

Under Alternative F, only renovation of existing facilities at the Hot Springs Campus provided for in annual budgets would occur. Soil disturbance from building renovation activities would be minimal. Exposed soils would be susceptible to erosion from stormwater runoff from the construction site.



Temporary increases in sedimentation in stormwater drainages could occur as a result of surface runoff erosion.

The use of construction materials and generation of construction wastes could increase the potential for stormwater contamination that could adversely affect water quality. Additionally, spills or leaks from construction equipment could adversely affect water quality if allowed to enter surface waters. However, these potential impacts would be less than potential impacts from the renovation or new facility construction activities of Alternatives A-1 and A-2 through E.

Groundwater resources would not be affected by renovation activities.

Construction-related impacts, if any, would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices, as described in Chapter 5.

#### **4.5.8.2      *Impacts from Operation***

Continued operation of the facilities is not expected to result in adverse impacts to hydrology and water quality. Landscape vegetation would be maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the municipal wastewater treatment plant in each city of operation.

### **4.5.9          Supplemental Alternative G**

#### **4.5.9.1      *Impacts from Construction***

Under Supplemental Alternative G, depending on the intended use, some facility renovation may be required, but construction of facilities would not be expected to exceed that described for Alternative E. The potential impacts from construction and regulatory compliance requirements would be similar to those of Alternative E if there was a small amount of construction or Alternative F if there was none.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices, as described in Chapter 5.

#### **4.5.9.2      *Impacts from Operation***

Operation of the VA Hot Springs Campus facilities by a new tenant is not expected to result in adverse impacts to hydrology and water quality. For construction of any new building, landscape vegetation would be installed and maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the Hot Springs municipal wastewater treatment plant.

## 4.6 Wildlife and Habitat

### 4.6.1 Evaluation Criteria

Impacts on biological resources are based on (1) the legal, commercial, recreational, ecological, or scientific importance of the resource; (2) the proportion of the resource that would be affected relative to its occurrence in the region; (3) the sensitivity of the resource to the proposed activities; and (4) the duration of ecological effects. An adverse impact on a biological resource would be identified in the case of a violation of the laws and regulations pertaining to biological resources, if species or habitats of high concern are adversely affected over relatively large areas, or if disturbances cause reductions in population size or distribution of a species of special concern. A habitat perspective is used to provide a framework for analysis of general classes of effects such as those caused by due to removal of critical habitat, noise, or human disturbance.

New sites have not yet been selected for a proposed CBOC, RRTP, and MSOC in Hot Springs or Rapid City. For purposes of bounding the impact analysis, it is assumed that the alternatives would involve new construction on a previously undisturbed site. Ground disturbance and noise associated with construction might directly or indirectly cause potential effects on wildlife and habitat. Direct effects from ground disturbance were evaluated by identifying the types of potential ground-disturbing activities and area affected in comparison to the extent of existing resources. Mortality of individuals, habitat removal, and damage or degradation of habitats are impacts that might be associated with ground-disturbing activities. By itself, noise associated with these alternatives is not likely to be of sufficient magnitude to result in the direct loss of individuals or reduce reproductive output. Effects assessment considered the number of individuals or protected species involved, amount of habitat affected, relationship of the area of potential effect to total available habitat within the region, type of stressors involved, and magnitude of the effects.

To evaluate effects to biological resources, the alternatives are reviewed with respect to the following criteria to determine whether any activities have the potential to directly or indirectly result in the following:

- Cause displacement of terrestrial or aquatic communities or loss of habitat
- Diminish the value of habitat for wildlife or plants
- Interfere with the movement of native resident or migratory wildlife species
- Conflict with applicable management plans for terrestrial, avian and aquatic species and their habitat
- Cause the introduction of noxious or invasive plant species
- Diminish the value of habitat for fish species;
- Cause a decline in native fish populations
- Affect or displace endangered, threatened, or other special status species
- Cause encroachment on or affect designated critical habitat of a federally listed species

## 4.6.2 Alternative A-1

### 4.6.2.1 Impacts from Construction

Under Alternative A-1, construction activities would include site grading and preparation, which would clear existing vegetation and habitat. Siting the new CBOC in Hot Springs would disturb up to approximately 5 acres of land, and siting the new MSOC and RRTP in Rapid City would disturb up to approximately 17 acres of land if a greenfield site is selected.

Locations for the new facilities have not yet been selected; therefore, site-specific impacts on habitat and wildlife species within or adjacent to individual sites cannot be evaluated on a site-specific basis in this EIS. However, given the relatively small affected areas within each city in relation to available wildlife habitat in the area, habitat disturbance is expected to be minimal. In addition, VA's site selection process would include reviewing potential locations for the presence of sensitive ecological resources and protected species and a preference to avoid such locations.

Animal species that are adapted to more urban areas, such as small mammals (mice, rabbits, ground squirrels), birds, and reptiles would be affected at any site located within the city limits. Some of the less mobile species within the construction zone could perish during land-clearing activities and from increased vehicular traffic during construction and operation. Activities and noise associated with construction could cause larger mammals and birds to relocate to similar habitat in the area. Depending on the populations present in those areas, the ecosystem dynamics could be altered, adding stress if food or shelter were limited. Prior to construction, the proposed site would be surveyed for nests of migratory birds in accordance with the *Migratory Bird Treaty Act*. Construction impacts related to the presence of heavy equipment and related noise would be short-term, concentrated in the first year of an estimated two-year construction schedule for each new facility. To the extent that some of the building components may be constructed elsewhere, an offsite construction process has an advantage of reducing construction time and decreasing site disruption.

With respect to impacts on potential greenfield sites, VA would make efforts to preserve existing natural features and significant vegetation and avoid impacts to sensitive resources as part of the site selection process, consistent with VA siting guidelines (VA 2013), including:

- Preserve and conserve natural features and significant vegetation, especially trees and shrubs (including sensitive habitat), for environmental protection (reduce maintenance and enhance sustainability).
- Preserve existing trees, forests, wetlands and landscape features that are important resources and visual assets; site analysis and planting design shall identify, retain and protect mature trees and vegetation, whenever reasonably possible.
- Minimize site disturbance and modification to natural topography.
- Concentrate development in areas with minimal non-engineered slopes and existing infrastructure.
- Mitigate any construction disturbance.
- Minimize creation of impervious surfaces.
- Maximize use of existing drainage patterns and features.

- Use required buffers/setbacks to restrict use of the area if any wetlands or protected waterways are on the site; all wetlands and waterways on federal lands must be identified and protected throughout the site design and construction process and after the project is finished.

Although site clearing would destroy individual plants and would kill or displace individual animals (particularly small mammals and songbirds with limited home ranges), no adverse effects to these species are expected from implementing any of the alternatives because non-sensitive species impacts are assessed on a regional population-level basis.

Aquatic resources may be indirectly affected through increased runoff or water and soil to surface waters from construction sites. Additionally, incidental spills or leaks from construction equipment could adversely affect water quality and aquatic resources if they enter surface waters. However, implementation of best management practices and conformance with NPDES permit requirements would help minimize impacts on water quality and thus aquatic resources; these minimization opportunities are described in Chapter 5. Therefore, the impacts to aquatic ecosystem are expected to be minimal.

### *Protected Species and Habitats*

Table 3.6-2 in Section 3.6 lists the federally and state-protected endangered and threatened species occurring or potentially occurring within the Fall River and Pennington Counties. If a site was selected on which construction and operation of a proposed facility could disturb, displace, injure, or kill a protected species, a site-specific analyses and consultation with the U.S. Fish and Wildlife Service (FWS) and South Dakota Department of Fish and Game (SDDFG) would be required before the project is implemented. That analysis would take into account specific locations for the facilities in relation to the location of sensitive habitats and sensitive species at or near the site, particularly species listed by the FWS or state as endangered or threatened.

For those sites that may contain sensitive habitats or protected wildlife, the degree to which these habitats and wildlife may be affected by noise or vibration disturbance, human presence, vehicle or equipment emissions, runoff, or encroachment by nearby construction activities depends on the likelihood such species or habitat are present and VA's ability to avoid siting near sensitive habitats and protected wildlife species. The occurrence of sensitive habitats and wildlife within Hot Springs and Rapid City area varies by location, with low to no occurrence in the developed city centers and slightly higher occurrence in adjacent rural areas, particularly in the adjoining Black Hills area.

The potential for site clearing and excavation to affect nearby sensitive habitats, including wetlands and designated critical habitats of federally and state-listed endangered and threatened species, was assumed to be proportional to facility acreage requirements. Considering the relatively small land requirements for the proposed facilities, compared to many federal and commercial development projects, it is expected that VA would have a great degree of flexibility in selecting a suitable site that would allow minimal impact to wildlife and habitat. VA follows siting guidelines that emphasize preservation (through avoidance) of sensitive habitats and special status vegetation and species, as listed above.

Pre-construction surveys and coordination/consultation with FWS and SDDFG would be conducted, as appropriate, to ensure that impacts on any sensitive animal and plant species in the

vicinity of the selected site are negligible and that appropriate mitigation and minimization actions are implemented. Mitigation measures could include site development plans that avoid disturbing species or habitat, timing activities to avoid critical timeframes such as breeding season, or relocating sensitive species away from areas likely to be disturbed. Appropriate mitigations would be coordinated with the regulatory agencies as part of the consultation process. As needed, site-specific NEPA analysis tiered to this EIS would evaluate the extent and severity of impacts from developing sites or undertaking actions that are not within the bounds of the analysis in this EIS.

#### **4.6.2.2      *Impacts from Operation***

Operation of the new facilities could impact wildlife in the area due to human presence. Facility emissions would be minimal and would comply with all applicable regulations and permitting procedures. No point-source discharges to surface water are anticipated from routine operation of the facilities proposed under Alternative A-1. Depending on the site, there could be a potential for stormwater runoff to enter aquatic habitat. However, the mitigation and minimization measures described in Chapter 5 would ensure impacts are minimized. Therefore, the impacts to aquatic ecosystems are expected to be minimal.

The municipal water system would provide the water requirements for the proposed Hot Springs and Rapid City facilities. No need to withdraw water from surface water sources is anticipated; thus, surface water volumes would not be affected and would continue to adequately support the existing aquatic ecosystem.

Operational impacts on sensitive habitats would be unlikely because any airborne and aqueous effluents would be controlled and permitted. Because species and habitat presence would be considered during site selection, it is unlikely that any federally or state-listed threatened or endangered species would be affected by facility operations.

### **4.6.3          *Alternative A-2***

#### **4.6.3.1      *Impacts from Construction***

Under Alternative A-2, construction activities would include site grading and preparation, which would disturb existing vegetation and habitat. Vegetation and habitat disturbance from building renovation activities at the existing Hot Springs Campus would be minimal since activities would occur primarily within Building 12. Approximately 17 acres could be disturbed in Rapid City for construction of an MSOC and RRTP. A location for this new facility has not yet been selected; however, impacts would be identical to those in Rapid City under Alternative A-1, which would also affect up to 17 acres of land. Overall impacts from construction under Alternative A-2 are expected to be minimal.

#### **4.6.3.2      *Impacts from Operation***

The size of the proposed new facility in Rapid City under Alternative A-2 is identical to that proposed in Rapid City under Alternative A-1. Therefore, impacts are expected to be the same. Activities proposed at the existing Hot Springs Campus would not disturb any new land. Operation of the proposed facilities under Alternative A-2 is not expected to result in adverse impacts to existing ecological resources including vegetation and habitat and wildlife.



## **4.6.4 Alternative B**

### **4.6.4.1 Impacts from Construction**

Under Alternative B, construction would include site grading and preparation, which would disturb existing vegetation and habitat. Up to approximately 15 acres could be disturbed in Hot Springs and up to approximately 10 acres could be disturbed in Rapid City. Locations for the new facilities have not yet been selected.

Impacts from construction under Alternative B would be very similar to those under Alternative A-1, since similar facilities would be constructed and the same conditions would apply. The land requirements would be slightly different under Alternative B, potentially disturbing a slightly larger area in Hot Springs (15 acres versus 5 acres under Alternative A-1) and a slightly smaller area in Rapid City (10 acres versus 17 acres under Alternative A-1). However, overall impacts from construction under Alternative B are expected to be minimal.

Locations for the new facilities have not yet been selected, therefore site-specific impacts on terrestrial and aquatic habitats and wildlife within or adjacent to individual sites cannot be evaluated in this EIS, and would be addressed in additional NEPA analysis as needed. However, given the relatively small potentially affected areas within each city in relation to available wildlife habitat in the area, and VA's site selection process that would avoid sites that have or are near protected species or sensitive habitat, habitat disturbance is expected to be minimal.

Considering the relatively small land requirements for new facilities under the alternatives and the small amount of sensitive habitat within the city limits of Hot Springs and Rapid City, it is expected that VA would have a great degree of flexibility in selecting a suitable site that would have minimal impact on sensitive habitat and wildlife. Appropriate mitigation measures (see Chapter 5) and coordination/consultation with FWS and SDDFG would ensure that site clearing to implement any alternative would not affect protected species or their habitat.

### **4.6.4.2 Impacts from Operation**

The proposed facilities under Alternative B are not significantly different from those under Alternative A-1. Therefore, impacts from Alternative B from facility operation in Hot Springs and Rapid City would be similar to those from Alternative A-1. Operation of the facilities is not expected to result in adverse impacts to existing ecological resources including vegetation, habitat, and wildlife.

## **4.6.5 Alternative C**

### **4.6.5.1 Impacts from Construction**

Under Alternative C, construction activities would include site grading and preparation, which would disturb existing vegetation and habitat. Vegetation and habitat disturbance from building renovation activities at the existing Hot Springs Campus would be minimal since most activities would occur within existing buildings. Approximately 10 acres could be disturbed in Rapid City for construction of an MSOC. A location for this new facility has not yet been selected; however, impacts would be identical to those in Rapid City under Alternative B, which would also affect up to 10 acres of land. Overall impacts from construction under Alternative B are expected to be minimal.

#### **4.6.5.2      *Impacts from Operation***

The size of the proposed new facility in Rapid City under Alternative C is identical to that proposed in Rapid City under Alternative B. Therefore, impacts are expected to be the same. Activities proposed at the existing Hot Springs Campus would not disturb any new land. Operation of the proposed facilities under Alternative C is not expected to result in adverse impacts to existing ecological resources including vegetation and habitat and wildlife.

### **4.6.6      *Alternative D***

#### **4.6.6.1      *Impacts from Construction***

Under Alternative D, construction activities would include site grading and preparation, which would disturb existing vegetation and habitat. Up to approximately 13 acres could be disturbed in Hot Springs and up to approximately 17 acres could be disturbed in Rapid City.

Locations for the new facilities have not yet been selected; however, impacts occurring in Hot Springs would be somewhat less than but similar to those under Alternative B (where up to 15 acres would be affected), and impacts occurring in Rapid City would be similar to those under Alternative A-1.

#### **4.6.6.2      *Impacts from Operation***

The sizes of the proposed new facilities in Hot Springs and Rapid City under Alternative D are not significantly different from those proposed under Alternatives A-1, A -2, and B. Therefore, impacts from Alternative B from facility operation in Hot Springs and Rapid City would be similar to those from Alternatives A and B. Operation of the facilities is not expected to result in adverse impacts to existing ecological resources including vegetation and habitat and wildlife.

### **4.6.7      *Alternative E***

#### **4.6.7.1      *Impacts from Construction***

Under Alternative E, construction activities would include the renovation of existing facilities and minor onsite new construction in previously disturbed areas on the VA Hot Springs Campus. The majority of renovation work in Hot Springs would be confined to building interiors and disturbance to existing vegetation and habitat from building renovation activities would be minimal, affecting less than two acres.

Up to approximately 10 acres could be disturbed in Rapid City for the new MSOC. A location for this new facility has not yet been selected; however, impacts would be identical to those in Rapid City under Alternative B, which would also affect up to 10 acres of land. Overall impacts from construction under Alternative E are expected to be minimal.

#### **4.6.7.2      *Impacts from Operation***

Continued operation of the existing facilities, even with some new facility uses and limited new construction at the Hot Springs Campus, is not expected to result in adverse impacts to ecological resources including vegetation, habitat, and wildlife.

The size of the proposed new facility in Rapid City under Alternative E is identical to that proposed in Rapid City under Alternative B. Therefore, impacts are expected to be the same.

## **4.6.8 Alternative F**

### **4.6.8.1 Impacts from Construction**

Under Alternative F, there would be no (or limited) exterior construction. Ground disturbance would be minimal and there would be no appreciable change in existing habitat and wildlife conditions. This alternative would have no adverse impact on ecological resources, including terrestrial and aquatic resources or sensitive habitats and species.

### **4.6.8.2 Impacts from Operation**

Continued operation of the existing facilities in Hot Springs and Rapid City under Alternative F is not expected to result in adverse impacts to existing ecological resources including vegetation, habitat, and wildlife.

## **4.6.9 Supplemental Alternative G**

### **4.6.9.1 Impacts from Construction**

Under Alternative G, some of the existing facilities in Hot Springs would be re-used by other tenants. Depending on the intended use, some facility renovation and small construction (as in Alternative E) may be required; the majority of renovation activities are assumed to occur inside and ground disturbance would be minimal (two acres or less is assumed). Impacts on ecological resources would be minimal to none, similar to those of Alternatives E and F.

### **4.6.9.2 Impacts from Operation**

Operations from re-use of some or all of the VA Hot Springs Campus by a tenant are not expected to result in adverse impacts to ecological resources, including habitat and wildlife; activities and impacts are estimated to be bounded by those projected for Alternatives E and F, depending on the intensity of onsite activity.

## 4.7 Noise

To assess the potential short-term noise impacts from construction, sensitive receptors and their relative levels of exposure were identified. Construction noise generated by the proposed projects was predicted using the Roadway Construction Noise Model (FHWA 2006). Noise levels of specific construction equipment and resultant noise levels at representative locations were calculated.

Ground-borne vibration impacts from construction activities were assessed based on existing documentation (such as for vibration levels produced by specific construction equipment operations) and the distance of sensitive receptors from the given source. Vibration levels were predicted, and impacts were evaluated against the established thresholds.

Two primary groups of noise-generating activities were identified: construction and renovation. For each activity group, noise levels were predicted using the Roadway Construction Noise Model (FHWA 2006). Default values for equipment specification sound levels and usage factors were used in modeling predicted noise levels. It was assumed that all equipment is in use simultaneously (conservative assumption overestimating predicted noise levels) and the construction site is surrounded by a noise barrier with some gaps (providing an estimated noise shielding of five A-weighted decibels [dBA]). Outdoor noise levels were predicted at distances from the source equipment of 100 feet and 500 feet. Figures 4.7-1 through 4.7-6 provide the model results.

For the construction activities group, the following pieces of equipment were assumed to potentially be in use:

Backhoe	Flat bed truck
Compactor (ground)	Front end loader
Compressor (air)	Generator
Concrete mixer truck	Grader
Concrete pump truck	Man lift
Concrete saw	Pickup truck
Crane	Pneumatic tools
Dozer	Pumps
Dump truck	Scraper
Excavator	Warning horn

The resulting predicted equivalent continuous noise level ( $L_{eq}$ ) for the construction activities group at a distance of 100 feet is 81.0 dBA and at a distance of 500 feet is 67.0 dBA.

For the renovation activities group, the following pieces of equipment were assumed to potentially be in use:

Backhoe	Generator
Compactor (ground)	Man lift
Compressor (air)	Pickup truck
Crane	Pneumatic tools
Dump truck	Pumps
Flat bed truck	Warning horn
Front end loader	

Roadway Construction Noise Model (RCNM),Version 1.1														
Report date:		2/9/2015												
Case Description:		BHHCS EIS - Construction Activities												
---- Receptor #1 ----														
		Baselines (dBA)												
Description	Land Use	Daytime	Evening	Night										
Hot Springs, SD @ 100 ft	Residential	50	40	35										
		Equipment												
	Impact		Spec	Actual	Receptor	Estimated								
	Device	Usage (%)	Lmax	Lmax	Distance	Shielding								
Description			(dBA)	(dBA)	(feet)	(dBA)								
Backhoe	No	40	80		100	5								
Compactor (ground)	No	20	80		100	5								
Compressor (air)	No	40	80		100	5								
Concrete Mixer Truck	No	40	85		100	5								
Concrete Pump Truck	No	20	82		100	5								
Concrete Saw	No	20	90		100	5								
Crane	No	16	85		100	5								
Dozer	No	40	85		100	5								
Dump Truck	No	40	84		100	5								
Excavator	No	40	85		100	5								
Flat Bed Truck	No	40	84		100	5								
Front End Loader	No	40	80		100	5								
Generator	No	50	82		100	5								
Grader	No	40	85		100	5								
Man Lift	No	20	85		100	5								
Pickup Truck	No	40	55		100	5								
Pneumatic Tools	No	50	85		100	5								
Pumps	No	50	77		100	5								
Scraper	No	40	85		100	5								
Warning Horn	No	5	85		100	5								
Results														
Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compactor (ground)	69	62	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compressor (air)	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Mixer Truck	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Pump Truck	71	64	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Saw	79	72	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Crane	74	66	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dozer	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dump Truck	73	69	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Excavator	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Flat Bed Truck	73	69	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Front End Loader	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Generator	71	68	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Grader	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Man Lift	74	67	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pickup Truck	44	40	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pneumatic Tools	74	71	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pumps	66	63	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Scraper	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Warning Horn	74	61	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Total	79	81	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.														

Note: dBA = A-weighted decibel.  $L_{eq}$  = equivalent continuous noise level.  $L_{max}$  = maximum noise level.

Figure 4.7-1. Hot Springs Construction Noise Estimates at 100 Feet from Source.



Roadway Construction Noise Model (RCNM),Version 1.1														
Report date:		2/9/2015												
Case Description:		BHHCS EIS - Construction Activities												
---- Receptor #2 ----														
Baselines (dBA)														
Description	Land Use	Daytime	Evening	Night										
Hot Springs, SD @ 500 ft	Residential	50	40	35										
Equipment														
		Impact		Spec	Actual	Receptor	Estimated							
		Lmax	Lmax	Lmax	Lmax	Distance	Shielding							
Description		Device	Usage (%)	(dBA)	(dBA)	(feet)	(dBA)							
Backhoe		No	40	80		500	5							
Compactor (ground)		No	20	80		500	5							
Compressor (air)		No	40	80		500	5							
Concrete Mixer Truck		No	40	85		500	5							
Concrete Pump Truck		No	20	82		500	5							
Concrete Saw		No	20	90		500	5							
Crane		No	16	85		500	5							
Dozer		No	40	85		500	5							
Dump Truck		No	40	84		500	5							
Excavator		No	40	85		500	5							
Flat Bed Truck		No	40	84		500	5							
Front End Loader		No	40	80		500	5							
Generator		No	50	82		500	5							
Grader		No	40	85		500	5							
Man Lift		No	20	85		500	5							
Pickup Truck		No	40	55		500	5							
Pneumatic Tools		No	50	85		500	5							
Pumps		No	50	77		500	5							
Scraper		No	40	85		500	5							
Warning Horn		No	5	85		500	5							
Results														
Calculated (dBA)														
Noise Limits (dBA)														
Noise Limit Exceedance (dBA)														
Day														
Evening														
Night														
Day														
Evening														
Night														
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	55	51	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compactor (ground)	55	48	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compressor (air)	55	51	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Mixer Truck	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Pump Truck	57	50	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Saw	65	58	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Crane	60	52	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dozer	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dump Truck	59	55	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Excavator	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Flat Bed Truck	59	55	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Front End Loader	55	51	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Generator	57	54	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Grader	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Man Lift	60	53	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pickup Truck	30	26	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pneumatic Tools	60	57	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pumps	52	49	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Scraper	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Warning Horn	60	47	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Total	65	67	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.														

Roadway Construction Noise Model (RCNM),Version 1.1														
Report date:		2/9/2015												
Case Description:		BHHCS EIS - Construction Activities												
---- Receptor #3 ----														
Baselines (dBA)														
Description	Land Use	Daytime	Evening	Night										
Rapid City, SD @ 100 ft	Residential	55	40	35										
Equipment														
	Impact		Spec	Actual	Receptor	Estimated								
	Device	Usage (%)	Lmax	Lmax	Distance	Shielding								
Description			(dBA)	(dBA)	(feet)	(dBA)								
Backhoe	No	40	80		100	5								
Compactor (ground)	No	20	80		100	5								
Compressor (air)	No	40	80		100	5								
Concrete Mixer Truck	No	40	85		100	5								
Concrete Pump Truck	No	20	82		100	5								
Concrete Saw	No	20	90		100	5								
Crane	No	16	85		100	5								
Dozer	No	40	85		100	5								
Dump Truck	No	40	84		100	5								
Excavator	No	40	85		100	5								
Flat Bed Truck	No	40	84		100	5								
Front End Loader	No	40	80		100	5								
Generator	No	50	82		100	5								
Grader	No	40	85		100	5								
Man Lift	No	20	85		100	5								
Pickup Truck	No	40	55		100	5								
Pneumatic Tools	No	50	85		100	5								
Pumps	No	50	77		100	5								
Scraper	No	40	85		100	5								
Warning Horn	No	5	85		100	5								
Results														
Calculated (dBA)														
Noise Limits (dBA)														
Noise Limit Exceedance (dBA)														
		Day		Evening		Night		Day		Evening		Night		
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compactor (ground)	69	62	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compressor (air)	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Mixer Truck	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Pump Truck	71	64	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Saw	79	72	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Crane	74	66	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dozer	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dump Truck	73	69	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Excavator	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Flat Bed Truck	73	69	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Front End Loader	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Generator	71	68	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Grader	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Man Lift	74	67	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pickup Truck	44	40	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pneumatic Tools	74	71	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pumps	66	63	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Scraper	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Warning Horn	74	61	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Total	79	81	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.														

Note: dBA = A-weighted decibel. Leq = equivalent continuous noise level. Lmax = maximum noise level.

Figure 4.7-3. Rapid City Construction Noise Estimates at 100 Feet from Source.

Roadway Construction Noise Model (RCNM),Version 1.1															
Report date:		2/9/2015													
Case Description:		BHHCS EIS - Construction Activities													
---- Receptor #4 ----															
		Baselines (dBA)													
Description	Land Use	Daytime	Evening	Night											
Rapid City, SD @ 500 ft	Residential	55	40	35											
		Equipment													
		Impact		Spec	Actual	Receptor	Estimated								
		Device	Usage (%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)								
Description															
Backhoe		No	40	80		500	5								
Compactor (ground)		No	20	80		500	5								
Compressor (air)		No	40	80		500	5								
Concrete Mixer Truck		No	40	85		500	5								
Concrete Pump Truck		No	20	82		500	5								
Concrete Saw		No	20	90		500	5								
Crane		No	16	85		500	5								
Dozer		No	40	85		500	5								
Dump Truck		No	40	84		500	5								
Excavator		No	40	85		500	5								
Flat Bed Truck		No	40	84		500	5								
Front End Loader		No	40	80		500	5								
Generator		No	50	82		500	5								
Grader		No	40	85		500	5								
Man Lift		No	20	85		500	5								
Pickup Truck		No	40	55		500	5								
Pneumatic Tools		No	50	85		500	5								
Pumps		No	50	77		500	5								
Scraper		No	40	85		500	5								
Warning Horn		No	5	85		500	5								
		Results													
		Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)					

Roadway Construction Noise Model (RCNM),Version 1.1															
Report date:		2/9/2015													
Case Description:		BHHCS EIS - Construction Activities													
---- Receptor #1 ----															
		Baselines (dBA)													
Description	Land Use	Daytime	Evening	Night											
Hot Springs, SD @ 100 ft	Residential	50	40	35											
		Equipment													
	Impact		Spec	Actual	Receptor	Estimated									
	Lmax		Lmax	Lmax	Distance	Shielding									
Description	Device	Usage (%)	(dBA)	(dBA)	(feet)	(dBA)									
Backhoe	No	40	80		100	5									
Compactor (ground)	No	20	80		100	5									
Compressor (air)	No	40	80		100	5									
Crane	No	16	85		100	5									
Dump Truck	No	40	84		100	5									
Flat Bed Truck	No	40	84		100	5									
Front End Loader	No	40	80		100	5									
Generator	No	50	82		100	5									
Man Lift	No	20	85		100	5									
Pickup Truck	No	40	55		100	5									
Pneumatic Tools	No	50	85		100	5									
Pumps	No	50	77		100	5									
Warning Horn	No	5	85		100	5									
Results															
		Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe		69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compactor (ground)		69	62	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compressor (air)		69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Crane		74	66	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dump Truck		73	69	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Flat Bed Truck		73	69	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Front End Loader		69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Generator		71	68	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Man Lift		74	67	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pickup Truck		44	40	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pneumatic Tools		74	71	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pumps		66	63	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Warning Horn		74	61	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Total		74	77.6	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.															

Note: dBA = A-weighted decibel.  $L_{eq}$  = equivalent continuous noise level.  $L_{max}$  = maximum noise level.

Figure 4.7-5. Hot Springs Renovation Noise Estimates at 100 Feet from Source.

Roadway Construction Noise Model (RCNM),Version 1.1														
Report date:		2/9/2015												
Case Description:		BHHCS EIS - Construction Activities												
---- Receptor #2 ----														
Baselines (dBA)														
Description	Land Use	Daytime	Evening	Night										
Hot Springs, SD @ 500 ft	Residential	50	40	35										
Equipment														
	Impact		Spec	Actual	Receptor	Estimated								
			Lmax	Lmax	Distance	Shielding								
Description	Device	Usage (%)	(dBA)	(dBA)	(feet)	(dBA)								
Backhoe	No	40	80		500	5								
Compactor (ground)	No	20	80		500	5								
Compressor (air)	No	40	80		500	5								
Crane	No	16	85		500	5								
Dump Truck	No	40	84		500	5								
Flat Bed Truck	No	40	84		500	5								
Front End Loader	No	40	80		500	5								
Generator	No	50	82		500	5								
Man Lift	No	20	85		500	5								
Pickup Truck	No	40	55		500	5								
Pneumatic Tools	No	50	85		500	5								
Pumps	No	50	77		500	5								
Warning Horn	No	5	85		500	5								
Results														
Calculated (dBA)														
Noise Limits (dBA)														
Noise Limit Exceedance (dBA)														
Day														
Evening														
Night														
Day														
Evening														
Night														
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	55	48	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compactor (ground)	55	48	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compressor (air)	55	51	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Crane	60	52	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dump Truck	59	55	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Flat Bed Truck	59	55	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Front End Loader	55	51	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Generator	57	54	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Man Lift	60	53	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pickup Truck	30	26	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pneumatic Tools	60	57	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pumps	52	49	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Warning Horn	60	47	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Total	60	63.7	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.														



The resulting predicted  $L_{eq}$  for the construction activities group at a distance of 100 feet is 77.6 dBA and at a distance of 500 feet is 63.7 dBA.

At distances from the noise-generating activities of greater than 2,000 feet (0.38 miles), predicted noise levels are not significantly above measured background sound levels and would not likely have an adverse impact on receptors.

#### **4.7.1 Evaluation Criteria**

An alternative would be considered to result in an adverse impact related to noise if it would result in either of the following:

- the exposure of receptors to construction noise levels in excess of U.S. Environmental Protection Agency (EPA) standards, as stated in Table 3.7-2 in Section 3.7
- exposure of persons or structures to excessive ground-borne vibration

#### **4.7.2 Alternative A-1**

##### **4.7.2.1 Impacts from Construction**

Under Alternative A-1, construction activities associated with the construction of a new CBOC in Hot Springs and a new MSOC and RRTP in Rapid City would occur. These activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 81.0 dBA at 100 feet from the source and 67.0 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the construction activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the construction activities continue to decrease as they approach existing background sound levels. In the event that VA operations are located in existing facilities rather than newly constructed facilities, the construction-related noise level increases described would not occur.

The perceived impacts from the increase in noise levels would depend on the receptor and site-specific conditions (including sound shielding). Locations for the proposed new facilities have not yet been selected, thus noise-related impacts to specific receptors cannot be determined. However, the predicted increases in noise levels would be consistent with typical urban construction projects, activities could be scheduled for normal daytime business hours, and proper equipment maintenance and noise shielding would minimize noise level increases from construction activities. Sound levels, in the immediate vicinity of the construction activities averaged over an entire day may approach the EPA-recommended noise level standards.

Construction activities would include vibration-producing activities (such as excavation, grading, basement excavation, and clearing). Depending on the specific construction equipment used and operations involved, short-term increases in ground vibration may result. Because locations for the proposed new facilities have not yet been selected, vibration-related impacts to specific receptors cannot be determined. The increase in vibration levels in the vicinity of the construction activities would be short-term but noticeable. Activities would be limited to daytime hours and would be anticipated to be a minor disturbance to neighboring receptors.

Construction-related noise impacts would be adverse, short-term, and potentially moderate in magnitude (approaching EPA threshold levels), depending on the receptor type and proximity to the project location. Construction-related vibration impacts would also be adverse, short-term, and potentially moderate in magnitude, depending on the receptor type and proximity to the project location. Mitigation, minimization, monitoring, and best practices to control noise and vibration impacts are listed in Chapter 5.

#### **4.7.2.2      *Impacts from Operation***

Routine operation of a CBOC, MSOC, and RRTP would not significantly increase sound levels from existing background levels. New facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Traffic-related noise levels may increase in the vicinity of the proposed new facilities, but would not be expected to increase disproportionately from current levels typical of urban settings. Routine operation would not be expected to increase vibration levels.

Operation-related noise impacts would be minor. Operation-related vibration impacts would not be expected.

### **4.7.3          *Alternative A-2***

#### **4.7.3.1      *Impacts from Construction***

Under Alternative A-2, the existing Building 12 in Hot Springs would be renovated to accommodate an updated CBOC, and a new MSOC and RRTP in Rapid City would be constructed. Construction activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 81.0 dBA at 100 feet from the source and 67.0 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the construction activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the construction activities continue to decrease as they approach existing background sound levels. In the event that VA operations are located in existing facilities rather than newly constructed facilities, the construction-related noise level increases described would not occur.

Renovation activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 77.6 dBA at 100 feet from the source and 63.7 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the renovation activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the renovation activities continue to decrease as they approach existing background sound levels.

The perceived impacts from the increase in noise levels would depend on the receptor and site-specific conditions (including sound shielding). Locations for the new facilities have not yet been selected, thus noise-related impacts to specific receptors cannot be determined. However, the predicted increases in noise levels would be consistent with typical urban construction projects, activities could be scheduled for normal daytime business hours, and proper equipment maintenance and noise shielding would minimize noise level increases from construction activities. Sound levels in the immediate vicinity of the construction activities averaged over an entire day may approach the EPA-recommended noise level standards.

Construction activities would include vibration-producing activities (such as excavation, grading, basement excavation, and clearing). Depending on the specific construction equipment used and operations involved, short-term increases in ground vibration may result. Locations for the new facilities have not yet been selected, thus vibration-related impacts to specific receptors cannot be determined. The increase in vibration levels in the vicinity of the construction and renovation activities would be short-term but noticeable. Activities would be limited to daytime hours and would be anticipated to be a minor disturbance to neighboring receptors.

Construction-related noise impacts would be adverse, short-term, and potentially moderate in magnitude (approaching EPA threshold levels) depending on the receptor type and proximity to the project location. Construction-related vibration impacts would also be adverse, short-term, and moderate in magnitude depending on the receptor type and proximity to the project location. Mitigation, monitoring, minimization, and best practices to control noise and vibration impacts are listed in Chapter 5.

#### **4.7.5.2      *Impacts from Operation***

Routine operation of a CBOC, MSOC, and RRTP would not significantly increase sound levels from existing background levels. New facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Traffic-related noise levels may increase in the vicinity of the new facility locations, but would not be expected to increase disproportionately from current levels typical of urban settings. Routine operation would not be expected to increase vibration levels.

Operation-related noise impacts would be minor. Operation-related vibration impacts would not be expected.

### **4.7.4      *Alternative B***

#### **4.7.4.1      *Impacts from Construction***

Under Alternative B, construction activities associated with the construction of a new CBOC and RRTP in Hot Springs and a new MSOC in Rapid City would occur. These activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 81.0 dBA at 100 feet from the source and 67.0 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the construction activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the construction activities continue to decrease as they approach existing background sound levels. In the event that VA operations are located in existing facilities rather than newly constructed facilities, the construction-related noise level increases described would not occur.

The perceived impacts from the increase in noise levels would depend on the receptor and site-specific conditions (including sound shielding). Locations for the new facilities have not yet been selected, and noise-related impacts to specific receptors cannot be determined. However, the predicted increases in noise levels would be consistent with typical urban construction projects, activities could be scheduled for normal daytime business hours, and proper equipment maintenance and noise shielding would minimize noise level increases from construction activities. Sound levels in the immediate vicinity of the construction activities averaged over an entire day may approach the EPA-recommended noise level standards.

Construction activities would include vibration-producing activities (such as excavation, grading, basement excavation, and clearing). Depending on the specific construction equipment used and operations involved, short-term increases in ground vibration may result. Locations for the new facilities have not yet been selected, thus vibration-related impacts to specific receptors cannot be determined. The increase in vibration levels in the vicinity of the construction activities would be short-term but noticeable. Activities would be limited to daytime hours and would be anticipated to be a minor disturbance to neighboring receptors.

Construction-related noise impacts would be adverse, short-term, and potentially moderate in magnitude (approaching EPA threshold levels) depending on the receptor type and proximity to the project location. Construction-related vibration impacts would also be adverse, short-term, and potentially moderate in magnitude depending on the receptor type and proximity to the project location. Mitigation, monitoring, minimization, and best practices to control noise and vibration impacts are listed in Chapter 5.

#### **4.7.4.2      *Impacts from Operation***

Routine operation of a CBOC, MSOC, and RRTP would not significantly increase sound levels from existing background levels. New facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Traffic-related noise levels may increase in the vicinity of new facility locations, but would not be expected to increase disproportionately from current levels typical of urban settings. Routine operation would not be expected to increase vibration levels.

Operation-related noise impacts would be minor. Operation-related vibration impacts would not be expected.

### **4.7.5      *Alternative C***

#### **4.7.5.1      *Impacts from Construction***

Under Alternative C, the existing CBOC and RRTP facilities in Hot Springs would be renovated, and a new MSOC in Rapid City would be constructed. Construction activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 81.0 dBA at 100 feet from the source and 67.0 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the construction activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the construction activities continue to decrease as they approach existing background sound levels. In the event that VA operations are located in existing facilities rather than newly constructed facilities, the construction-related noise level increases described would not occur.

Renovation activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 77.6 dBA at 100 feet from the source and 63.7 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the renovation activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the renovation activities continue to decrease as they approach existing background sound levels.

The perceived impacts from the increase in noise levels would depend on the receptor and site-specific conditions (including sound shielding). Locations for the new facilities have not yet been selected, thus noise-related impacts to specific receptors cannot be determined. However, the predicted increases in noise levels would be consistent with typical urban construction projects, activities could be scheduled for normal daytime business hours, and proper equipment maintenance and noise shielding would minimize noise level increases from construction activities. Sound levels in the immediate vicinity of the construction activities averaged over an entire day may approach the EPA-recommended noise level standards.

Construction activities would include vibration-producing activities (such as excavation, grading, basement excavation, and clearing). Depending on the specific construction equipment used and operations involved, short-term increases in ground vibration may result. Locations for the new facilities have not yet been selected, thus vibration-related impacts to specific receptors cannot be determined. The increase in vibration levels in the vicinity of the construction and renovation activities would be short-term but noticeable. Activities would be limited to daytime hours and would be anticipated to be a minor disturbance to neighboring receptors.

Construction-related noise impacts would be adverse, short-term, and potentially moderate in magnitude (approaching EPA threshold levels) depending on the receptor type and proximity to the project location. Construction-related vibration impacts would also be adverse, short-term, and moderate in magnitude depending on the receptor type and proximity to the project location. Mitigation, monitoring, minimization, and best practices to control noise and vibration impacts are listed in Chapter 5.

#### **4.7.5.2      *Impacts from Operation***

Routine operation of a CBOC, MSOC, and RRTP would not significantly increase sound levels from existing background levels. New facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Traffic-related noise levels may increase in the vicinity of the new facility locations, but would not be expected to increase disproportionately from current levels typical of urban settings. Routine operation would not be expected to increase vibration levels.

Operation-related noise impacts would be minor. Operation-related vibration impacts would not be expected.

### **4.7.6      *Alternative D***

#### **4.7.6.1      *Impacts from Construction***

Under Alternative D, construction activities associated with the construction of a new CBOC and RRTP in Hot Springs and a new MSOC and RRTP in Rapid City would occur. These activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 81.0 dBA at 100 feet from the source and 67.0 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the construction activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the construction activities continue to decrease as they approach existing background sound levels. In the event that VA operations are located in



existing facilities rather than newly constructed facilities, the construction-related noise level increases described would not occur.

The perceived impacts from the increase in noise levels would depend on the receptor and site-specific conditions (including sound shielding). Locations for the new facilities have not yet been selected, thus noise-related impacts to specific receptors cannot be determined. However, the predicted increases in noise levels would be consistent with typical urban construction projects, activities could be scheduled for normal daytime business hours, and proper equipment maintenance and noise shielding would minimize noise level increases from construction activities. Sound levels, in the immediate vicinity of the construction activities averaged over an entire day may approach the EPA-recommended noise level standards.

Construction activities would include vibration-producing activities (such as excavation, grading, basement excavation, and clearing). Depending on the specific construction equipment used and operations involved, short-term increases in ground vibration may result. Locations for the new facilities have not yet been selected, thus vibration-related impacts to specific receptors cannot be determined. The increase in vibration levels in the vicinity of the construction and demolition activities would be short-term but noticeable. Activities would be limited to daytime hours and would be anticipated to be a minor disturbance to neighboring receptors.

Construction-related noise impacts would be adverse, short-term, and potentially moderate in magnitude (approaching EPA threshold levels) depending on the receptor type and proximity to the project location. Construction-related vibration impacts would also be adverse, short-term, and potentially moderate depending on the receptor type and proximity to the project location. Mitigation, monitoring, minimization, and best practices to control noise and vibration impacts are listed in Chapter 5.

#### **4.7.6.2      *Impacts from Operation***

Routine operation of a CBOC, MSOC, and RRTP would not significantly increase sound levels from existing background levels. New facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Traffic-related noise levels may increase in the vicinity of the new facility locations, but would not be expected to increase disproportionately from current levels typical of urban settings. Routine operation would not be expected to increase vibration levels.

Operation-related noise impacts would be minor. Operation-related vibration impacts would not be expected.

### **4.7.7          *Alternative E***

#### **4.7.7.1      *Impacts from Construction***

Under Alternative E, a new MSOC would be constructed in Rapid City and some of the existing facilities in Hot Springs would be renovated, and new construction may be required to accommodate storage or additional housing. Renovation and construction activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 77.6 dBA at 100 feet from the source and 63.7 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the renovation

and construction activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the renovation and construction activities continue to decrease as they approach existing background sound levels.

The perceived impacts from the increase in noise levels would depend on the receptor and site-specific conditions (including sound shielding). The predicted increases in noise levels would be consistent with typical urban construction projects, activities could be scheduled for normal daytime business hours, and proper equipment maintenance and noise shielding would minimize noise level increases from construction activities. Sound levels, in the immediate vicinity of the renovation and construction activities and averaged over an entire day, may approach the EPA-recommended noise level standards.

Renovation and construction activities could include vibration-producing activities (such as excavation, grading, and clearing). Depending on the specific construction equipment used and operations involved, short-term increases in ground vibration may result. A location for the new MSOC in Rapid City has not yet been selected, thus vibration-related impacts to specific receptors cannot be determined. The increase in vibration levels in the vicinity of the construction and renovation activities would be short-term but noticeable. Activities would be limited to daytime hours and would be anticipated to be a minor disturbance to neighboring receptors.

Construction-related noise impacts would be adverse, short-term, and potentially moderate in magnitude (approaching EPA threshold levels) depending on the receptor type and proximity to the project location, including day and residential Veteran patients on campus. Construction-related vibration impacts would also be adverse, short-term, and potentially moderate, depending on the receptor type and proximity to the project location. Mitigation, monitoring, minimization, and best practices to control noise and vibration impacts are listed in Chapter 5.

#### **4.7.7.2      *Impacts from Operation***

Routine operation of the VA hospital and RRTP would not significantly increase sound levels from existing background levels at the Hot Springs Campus, nor would routine operation of an MSOC significantly increase sound levels from existing background levels in Rapid City. Renovated and facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Traffic-related noise levels may increase due to increased campus activity, but would not be expected to increase appreciably from current levels onsite. Routine operation would not be expected to increase vibration levels.

Operation-related noise impacts would be minor. Operation-related vibration impacts would not be expected.

### **4.7.8      *Alternative F***

#### **4.7.8.1      *Impacts from Construction***

Under Alternative F, some of the existing facilities in Hot Springs would be renovated as annual budgets allow. Renovation activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 77.6 dBA at 100 feet from the source and 63.7 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the renovation activities would be short-term but noticeable. As the distance

from the source is increased, the noise levels attributable to the renovation activities continue to decrease as they approach existing background sound levels.

The perceived impacts from the increase in noise levels would depend on the receptor and site-specific conditions (including sound shielding). The predicted increases in noise levels would be consistent with typical urban renovation projects, activities could be scheduled for normal daytime business hours, and proper equipment maintenance and noise shielding would minimize noise level increases from construction activities. Sound levels, in the immediate vicinity of the renovation activities, averaged over an entire day may approach the EPA-recommended noise level standards.

No vibration-producing activities (such as excavation, grading, and clearing) are anticipated.

Construction-related noise impacts would be adverse, short-term, and potentially moderate in magnitude (approaching EPA threshold levels) depending on the receptor type and proximity to the project location, including day and residential Veteran patients on campus. Construction-related vibration impacts are not anticipated. Mitigation monitoring, minimization, and best practices to control noise and vibration impacts are listed in Chapter 5.

#### **4.7.8.2      *Impacts from Operation***

Continued operation of the Hot Springs Campus and domiciliary would not increase sound levels from existing background levels. Renovated facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Routine operation would not be expected to increase vibration levels.

Operation-related noise and vibration impacts would not be expected.

### **4.7.9      Supplemental Alternative G**

#### **4.7.9.1      *Impacts from Construction***

Under Supplemental Alternative G, some or all of the existing facilities at the VA Hot Springs Campus would be re-used by other tenants. Depending on the intended use, some facility renovation or small-scale construction could occur. Impacts would be similar to those of Alternatives E (if there was some construction) or Alternative F (if improvements consisted only of renovations).

#### **4.7.9.2      *Impacts from Operation***

The operational noise-generating potential of new tenants on the existing VA Hot Springs Campus would depend on the intended use. However, uses would be compatible with the site's status as a National Historic Landmark; therefore, industrial operations or similar activities that would generate excessive noise would not occur, and noticeable increases in sound levels from existing background levels would not be expected. Renovated facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Routine operation would not be expected to increase vibration levels.

Operation-related noise and vibration impacts would not be expected.

## 4.8 Land Use

### 4.8.1 Evaluation Criteria

The evaluation of land use impacts focuses on current land use plans and zoning. In carrying out its federal functions, VA is not subject to state or local regulations absent a clear statutory waiver to the contrary. This concept is based upon the Supremacy Clause (Article VI) of the U.S. Constitution. Although local governments cannot regulate or permit activities of the federal government on federally owned land, federal agencies must consider local zoning laws for new building construction (40 United States Code [U.S.C.] 619(b)). VA actions on non-federal land (such as at a leased facility) are subject to the regulatory requirements of the landowner, including local plans and ordinances pertaining to land use and zoning.

General compatibility with existing and future land use designations and zoning ordinances is the basis to indicate the potential for land use impacts. Adverse land use impacts are identified if the reconfiguration proposal would:

- Be inconsistent with current or planned future land uses and community goals for land use
- Alter the character and use of the land in relation to surrounding uses
- Conflict with zoning designations or ordinances

### 4.8.2 Alternative A-1

#### 4.8.2.1 *Impacts from Construction*

Construction of the proposed CBOC in the Hot Springs area and the proposed co-located MSOC and RRTP in the Rapid City area would cause disturbances to adjacent land uses. The extent of the disturbance would depend on the type of adjacent land use. Should the adjacent land use be commercial or retail, daytime construction could have a temporary effect on access to these businesses and could be inconvenient to customers. Construction activities would not likely affect adjacent land use that is vacant (undeveloped), but could disturb users of adjacent land use that is open space or parkland.

#### 4.8.2.2 *Impacts from Operation*

##### 4.8.2.2.1 Hot Springs

The criteria for selecting a site in the Hot Springs area to operate a CBOC would be generally compatible with the land use objectives of the Hot Springs Comprehensive Plan (see Section 3.8.1.2.4) and current zoning. VA design guidance requirements for advancing local planning goals, prioritizing areas that are currently served by public infrastructure (utilities and roads), and protecting the natural environment while avoiding environmental hazards are generally compatible with the Hot Springs Comprehensive Plan objectives of intensifying land uses adjacent to transportation facilities, clustering activities to promote efficient land use, and prohibiting development in natural hazard areas. Based on the land use and zoning throughout Hot Springs (see Figure 3.8-1), it is anticipated a suitable site of five acres would be available in or adjacent to General Commercial, Mixed Use, or Highway Service zoning where a CBOC would be a compatible land use and not substantially conflict with zoning designations.

VA BHHCS would continue to maintain the Hot Springs Campus (although health care services would not be offered there) and the National Cemetery would be operated and maintained as usual; thus, there would be no impact on land use. Although VA health care services would continue to be offered in the Hot Springs area, vacating the campus would change one of “the factors [that] represent the keys to the future strength and vitality of the Hot Springs’ economy” in the City of Hot Springs Comprehensive Plan, which assumed the campus “will continue to grow in size and importance”. However, as federally owned land, the campus is not subject to local land use planning or zoning restrictions. Potential land use impacts due to re-use of the campus are described as part of Alternative G (see Section 4.8.8).

#### **4.8.2.2.2 Rapid City**

Both the Pennington County and Rapid City comprehensive plans recognize the area as a regional center for health care. The criteria for selecting sites in the Rapid City area to operate an MSOC and RRTP would be generally compatible with the planning policies that endorse health care services development (see Section 3.8.1.2.4). VA design guidance requirements for advancing local planning goals, prioritizing areas that are currently served by public infrastructure (utilities and roads), and protecting the natural environment while avoiding environmental hazards are generally compatible with the Rapid City Comprehensive Plan goals and policies of targeting infrastructure investments, supporting a diverse mix of land uses, and protecting natural resources. The city has sufficient scale, complexity, utilities, and other characteristics necessary to accommodate both an MSOC and RRTP. Based on the future land use throughout Rapid City (see Figure 3.8-2), it is anticipated suitable sites would be available in or adjacent to areas identified as Mixed Use or Employment categories where health care facilities would be a compatible land use. The Rapid City Comprehensive Plan provides flexibility in applying future land use categories; thus, site selection and facility design for an MSOC and RRTP should not substantially conflict with current or planned future land uses.

The Rapid City zoning ordinance (Rapid City 2014b) defines medical facilities to include “medical clinic” and “sanitarium.” Medical clinic is further defined as an examination and treatment facility for outpatients, whereas sanitarium is defined as an institution providing health facilities for inpatient medical treatment or treatment and recuperation using natural therapeutic agents. These definitions would include the health care services that would be provided at an MSOC and RRTP. The zoning ordinance allows for medical facilities in districts zoned as General Commercial, Neighborhood Commercial, Neighborhood Shopping Center, Community Shopping Center, or Office Commercial. A proposed MSOC and RRTP in the Rapid City area would require 14 to 17 acres. It is anticipated suitable sites would be available in or adjacent to these zoning districts; thus, operation of an MSOC and RRTP would not substantially conflict with zoning designations or the zoning ordinance.

The zoning ordinance defines group home as a facility that provides room, board, counseling, and rehabilitative services for individuals who, by reason of mental or physical disability, addiction to drugs or alcohol, or family and school adjustment problems, require specialized attention and care in order to achieve personal independence. This definition would include the health care services provided at the RRTP. A group home is a conditional use that may be permitted in Low, Medium, and High Density Residential and General Commercial zoning districts, as well as the Central Business district. It is anticipated suitable sites would be available in or adjacent to these zoning districts; thus, operation of an RRTP would not substantially conflict with these zoning designations or the zoning ordinance.



### **4.8.3 Alternative A-2**

#### **4.8.3.1 Impacts from Construction**

Renovations and modifications to building 12 for a CBOC on the VA Hot Springs Campus would not affect land use. No construction is proposed elsewhere in Hot Springs under this alternative so there would be no conflicts with existing land use and zoning designations. Potential temporary impacts to adjacent land uses from construction of an MSOC and RRTP in Rapid City would be similar to the temporary impacts described for Alternative A-1.

#### **4.8.3.2 Impacts from Operation**

##### **4.8.3.2.1 Hot Springs**

Health care operations and building maintenance would continue in certain buildings (e.g., Building 12) at the VA Hot Springs Campus, which would not affect the existing land use of the campus or the land uses or zoning designations of the areas surrounding the campus. As federally owned land, operation of the campus is not subject to local planning or zoning restrictions.

##### **4.8.3.2.2 Rapid City**

Impacts to land use and zoning from siting and operating a MSOC and RRTP in the Rapid City area would be similar to the impacts described for Alternative A-1.

### **4.8.4 Alternative B**

#### **4.8.4.1 Impacts from Construction**

Construction of a CBOC and RRTP in the Hot Springs area and an MSOC in the Rapid City area would cause disturbances to adjacent land uses. The extent of the disturbance would depend on the type of adjacent land use, and in Hot Springs the extent of disturbance would also depend on whether the CBOC and RRTP would be at separate sites or co-located. The potential land use impacts from construction would be similar to the impacts described for Alternative A-1.

#### **4.8.4.2 Impacts from Operation**

##### **4.8.4.2.1 Hot Springs**

The criteria for selecting sites in the Hot Springs area to operate a CBOC and 100-bed RRTP would be generally compatible with the land use objectives of the Hot Springs Comprehensive Plan and current zoning. Impacts to land use would be similar to the impacts described for Alternative A. However, a suitable site of 11 to 13 acres in the Hot Springs area to co-locate a CBOC and RRTP with a fire station may be difficult to locate within the currently zoned areas for General Commercial and Mixed Use as a compatible land use. A suitable site may be available within or adjacent to Highway Service zoning to avoid incompatible land uses, or located on land not zoned where a potential land use conflict could occur. The extent of any incompatible land use would depend on the surrounding land use and planned future use.

Health care services would not be offered at the VA Hot Springs Campus. The land use impacts of vacating the campus are similar to the impacts described for Alternative A-1.

#### **4.8.4.2.2 Rapid City**

The criteria for selecting a site in the Rapid City area to operate an MSOC would be generally compatible with the planning policies that endorse health care services development and the zoning ordinances that apply to medical facilities. Impacts to land use and zoning from siting and operating an MSOC in the Rapid City area would be similar to the impacts described for Alternative A-1. Because only an MSOC would be proposed under Alternative B, the land use and zoning restrictions for siting and operating an RRTP would not apply.

### **4.8.5 Alternative C**

#### **4.8.5.1 *Impacts from Construction***

Renovations and modifications to buildings on the VA Hot Springs Campus would not affect land use. No construction is proposed elsewhere in Hot Springs under this alternative so there would be no conflicts with existing land use and zoning designations. Potential temporary impacts to adjacent land uses from construction of an MSOC in Rapid City would be similar to the temporary impacts described for Alternative A-1.

#### **4.8.5.2 *Impacts from Operation***

##### **4.8.5.2.1 Hot Springs**

Health care operations and building maintenance would continue at the VA Hot Springs Campus, which would not affect the existing land use of the campus or the land uses or zoning designations of the areas surrounding the campus. As federally owned land, operation of the campus is not subject to local planning or zoning restrictions.

##### **4.8.5.2.2 Rapid City**

Impacts to land use and zoning from siting and operating an MSOC in the Rapid City area would be similar to the impacts described for Alternative B.

### **4.8.6 Alternative D**

#### **4.8.6.1 *Impacts from Construction***

Construction of a CBOC and 24-bed RRTP in the Hot Springs area and an MSOC and 76-bed RRTP in Rapid City area would cause disturbances to adjacent land uses. The extent of the disturbance would depend on the type of adjacent land use, and whether the facilities would be at separate sites or co-located. The potential temporary land use impacts from construction would be similar to the impacts described for Alternative A-1.

#### **4.8.6.2 *Impacts from Operation***

##### **4.8.6.2.1 Hot Springs**

The criteria for selecting sites in the Hot Springs area to operate a CBOC and 24-bed RRTP with a fire station would be generally compatible with the land use objectives of the Hot Springs Comprehensive Plan and current zoning. Impacts to land use would be similar to the impacts

described for Alternative A if the facilities are at separate locations or similar to Alternative B if the facilities are co-located.

Health care services would not be offered at the VA Hot Springs Campus. The land use impacts of vacating the campus are similar to the impacts described for Alternative A-1.

#### **4.8.6.2.2 Rapid City**

Impacts to land use and zoning from siting and operating an MSOC and 76-bed RRTP in the Rapid City area would be similar to the impacts described for Alternative A-1. Although the RRTP proposed for the Rapid City area would have fewer beds than Alternative A, the size of the site (14 to 17 acres) to co-locate the RRTP and MSOC would be similar.

### **4.8.7 Alternative E**

#### **4.8.7.1 Impacts from Construction**

Renovations and modifications to buildings and construction of additional buildings on the VA Hot Springs Campus are proposed under Alternative E. Open space that might be suitable for construction of new buildings is scattered throughout the campus. Although the overall use of the campus for health care services would remain, open space land use would be lost to construction of new buildings. Expansion on the campus would be consistent with the City of Hot Springs' planning, which assumed the campus "will continue to grow in size and importance". No construction is proposed elsewhere in Hot Springs under this alternative so there would be no conflicts with existing land use and zoning designations off the campus.

Potential temporary impacts to adjacent land uses or zoning from construction of an MSOC in Rapid City would be similar to the temporary impacts described for Alternative A-1. .

#### **4.8.7.2 Impacts from Operation**

##### **4.8.7.2.1 Hot Springs**

Health care operations and building maintenance would continue at the VA Hot Springs Campus, which would not affect the existing land uses or zoning designations of the areas surrounding the campus. Although the overall use of the campus for health care services would remain, open space land use would be lost to accommodate new buildings. As federally owned land, operation of the campus is not subject to local planning or zoning restrictions.

##### **4.8.7.2.2 Rapid City**

Impacts to land use and zoning from siting and operating an MSOC in the Rapid City area would be similar to the impacts described for Alternative B.

### **4.8.8 Alternative F**

#### **4.8.8.1 Impacts from Construction**

Upgrades and renovations to buildings to maintain clinical standards would be initiated as funding was available through the routine budgeting process. These construction projects would not affect the existing land uses or zoning designations of the areas surrounding the VA Hot Springs Campus.

There would be no upgrades or renovations to the existing CBOC in Rapid City so there would be no temporary impacts on land use or zoning from construction.

#### **4.8.8.2      *Impacts from Operation***

##### **4.8.8.2.1      Hot Springs**

Health care operations and building maintenance would continue at the VA Hot Springs Campus, which would not affect the existing land use of the campus or the land uses or zoning designations of the areas surrounding the campus. As federally owned land, operation of the campus is not subject to local planning or zoning restrictions.

##### **4.8.8.2.2      Rapid City**

The CBOC would continue to operate in Rapid City. If space is leased in a different location for a CBOC upon the expiration of the current lease, it is anticipated that the different location in Rapid City would be in compliance with the zoning ordinances for medical facilities and there would be no impact on land uses.

#### **4.8.9      Supplemental Alternative G**

##### **4.8.9.1      *Impacts from Construction***

Supplemental Alternative G involves full or partial re-use of the VA Hot Springs Campus and could only happen with implementation of Alternatives A, B, C, or D. If the proposed re-use included any renovations or modifications to buildings or construction of additional buildings on the VA Hot Springs Campus, these actions would be consistent with the City of Hot Springs' planning, which assumed the campus "will continue to grow in size and importance" and construction impacts would be similar to or less than those impacts described for Alternative E. If the potential re-use did not require any construction, renovation, or modification, potential impacts from construction would be similar to the impacts described for Alternative F.

##### **4.8.9.2      *Impacts from Operation***

Impacts to existing land use of the campus or to the land uses or zoning designations of the areas surrounding the campus would depend on the type of re-use selected. Should the re-use involve renovations and modifications to buildings and construction of additional buildings on the VA Hot Springs Campus to continue to operate as a medical facility, potential land use impacts would be similar to the impacts described for Alternative E.

If VA retains ownership of the Hot Springs Campus and re-use is accomplished through an enhanced-use lease, or if it is transferred to another federal agency, there would be no adverse effects on land use from implementing Supplemental Alternative G.

Should re-use involve the transfer of land ownership from the federal government, re-use plans would be subject to the Hot Springs Comprehensive Plan and zoning ordinances. Depending on the proposed type of re-use, the re-use proponent may have to coordinate with the City of Hot Springs to avoid conflict with, request a waiver from, or revise current land use plans and zoning ordinances. VA BHHCS would also ensure that any transfer agreement to a non-federal entity is developed in accordance with the outcome of appropriate *National Historic Preservation Act* consultation, and that

the agreement incorporates conditions and restrictions to ensure the prospective landowner would maintain the National Historic Landmark status of the site.



## 4.9 Floodplains and Wetlands

### 4.9.1 Evaluation Criteria

Executive Order 11988, *Floodplain Management*, requires VA to avoid adverse impacts associated with occupancy and modification of floodplains to the extent possible, and avoid direct and indirect support of floodplain development wherever there is a practicable alternative. According to the VA Site Development Design Manual, development within the 100-year floodplain should be avoided or limited, with structures in the floodplain only if absolutely necessary. For purposes of this evaluation, an impact to floodplains would be considered adverse if development impedes or redirects flood flows, no practicable alternative exists to development within a 100-year floodplain, or compliance with flood hazard reduction requirements is not technically or economically feasible.

Section 404 of the *Clean Water Act* requires authorization for activities that fill or disturb waters of the U.S, including wetlands. USACE determines if a wetland is within their jurisdictional authority to regulate waters of the U.S. To be a jurisdictional wetland, it must meet the regulatory definition and be adjacent to other waters of the U.S. For purposes of this evaluation, an impact to wetlands would be considered adverse if the loss of a jurisdictional wetland cannot be avoided or if compensatory mitigation is not feasible, and USACE does not authorize the activity that fills or disturbs the wetland.

### 4.9.2 Alternative A-1

#### 4.9.2.1 Impacts from Construction

There are no special flood hazard areas, other flood areas, or wetlands on the VA Hot Springs Campus that could be impacted. (Note that no construction on the campus is proposed under Alternative A-1.)

One criterion to selecting a site in Hot Springs to construct a CBOC and in Rapid City to construct an MSOC and RRTP would be to avoid sites within a designated 100-year floodplain. The size of the site for a proposed CBOC in Hot Springs is five acres. Based on the location and extent of the flood-prone areas throughout Hot Springs (see Figure 3.9-1), it is anticipated a suitable site would be available outside the 100-year floodplain to meet this site selection criterion. There would be practicable alternatives to developing within the 100-year floodplain; thus, construction activities would not impede flood flows or impact a floodplain in the Hot Springs area.

A proposed MSOC and RRTP in Rapid City would require 10 acres each or 14 to 17 acres if the buildings are co-located. The special flood hazard zones are located throughout the city and the extent varies based on proximity to Rapid Creek and to the larger tributaries and drainages entering Rapid Creek (see Figure 3.9-2). Together with other siting criteria, such as natural and built site features, infrastructure improvements, and public transportation access, the criterion of avoiding the 100-year floodplain would likely be met. Construction activities would therefore not impede flood flows or impact a 100-year floodplain in the Rapid City area.

A site could be selected in Rapid City within the 500-year floodplain, including the area of reduced flood risk due to levees, if other siting criteria are available and acceptable. New construction or renovation of existing buildings are permitted by the City of Rapid City within these other flood areas without specific flood reduction design and construction requirements, such as finished floor

elevations or floodproofing. Construction in these areas would not impede flood flows or cause a rise in flood elevations.

The wetland adjacent to Fall River in Hot Springs would not be impacted by construction simply because of its location. The two wetlands in the northeast corner of Hot Springs would not likely be impacted because their locations appear to be on residential properties near houses. This area would not meet the site selection criteria for a CBOC. The two manmade excavations in the southwest, regardless if disturbed by construction, would not meet the regulatory definition of a wetland and the locations are not adjacent to Fall River or other waters of the U.S. Therefore, no jurisdictional wetlands would be impacted by construction of a CBOC in Hot Springs.

Many of the wetlands shown on the National Wetlands Inventory in Rapid City are within or near the 100- and 500-year floodplains. Because of the floodplain locations, construction of an MSOC and RRTP would not likely impact these wetlands. It is possible a wetland(s) shown on the National Wetlands Inventory or observed in the field could be on a site determined to be available and meeting the selection criteria for acceptable siting for an MSOC and RRTP. Construction could impact the wetland(s) if the site design and layout of buildings and infrastructure could not avoid disturbing the wetland(s). The extent of any impact would not only depend on whether the wetland met the regulatory definition, but also the function, value, quality, and size of the wetland(s) that could be disturbed during construction.

Field surveys would be completed of potential sites to determine presence and jurisdiction of any wetlands. Impacts to jurisdictional (regulated) wetlands would be minimized to the extent practicable during construction. If jurisdictional wetlands cannot be avoided, VA would develop a mitigation plan to compensate for the lost function and value of the wetland either by creating or enhancing other wetlands onsite or at an offsite location through an established mitigation bank, or through an in-lieu fee program.

Impacts to any nearby floodplains or wetlands from changes to the site hydrology, stormwater runoff patterns, and stormwater volumes are addressed in Section 4.5. Site designs or structures, such as drainage swales or detention basins, could be necessary to manage stormwater on the selected site. Any such design or structure could potentially serve a secondary purpose of wetland creation.

#### **4.9.2.2      *Impacts from Operation***

VA BHHCS would continue to maintain the VA Hot Springs Campus, although health care operations would not be offered at that location. There are no special flood hazard areas, other flood areas, or wetlands on the campus that could be impacted regardless of continued maintenance activities.

Operations of a CBOC, MSOC, and RRTP at new locations in Hot Springs and Rapid City would not impede flood flows or affect floodplains or wetlands. Impacts to floodplains and wetlands would be addressed during the design and construction phases of the buildings at the selected sites.

### **4.9.3           Alternative A-2**

#### **4.9.3.1       *Impacts from Construction***

There are no floodplains or wetlands on the VA Hot Springs Campus that could be affected, regardless of renovations and modifications proposed to campus buildings under Alternative A-2.

No construction is proposed elsewhere in Hot Springs under this alternative so floodplains and wetlands would not be affected.

Potential impacts to floodplains and wetlands from construction of an MSOC and RRTP proposed for Rapid City would be similar to the impacts described for Alternative A-1. The process for identifying and minimizing impacts to any jurisdictional wetlands on potential sites would be as described for Alternative A-1.

#### **4.9.5.2       *Impacts from Operation***

Health care operations and building maintenance would continue at the VA Hot Springs Campus. There are no floodplains or wetlands on the campus that could be affected regardless of continued operations and maintenance.

Operations of an MSOC and RRTP at a new location in Rapid City would not impede flood flows or affect floodplains or wetlands. Impacts to floodplains and wetlands would be addressed during the design and construction phases of the buildings at the selected site.

### **4.9.4           Alternative B**

#### **4.9.4.1       *Impacts from Construction***

There are no special flood hazard areas, other flood areas, or wetlands on the VA Hot Springs Campus that could be impacted (note that no construction on the campus is proposed under Alternative B).

Potential impacts to floodplains and wetlands from construction would be similar to the impacts described for Alternative A-1. It is anticipated a suitable site of 11 to 13 acres would be available outside the 100-year floodplain in the Hot Springs area to co-locate a CBOC and RRTP with a fire station; thus, construction activities would not impede flood flows or impact the floodplain or wetlands. Because only an MSOC (10-acre site) is proposed for Rapid City, the extent of any construction-related impact on floodplains and wetlands could be less than Alternative A, but would depend on the location and features of the selected site. The process for identifying and minimizing impacts to any jurisdictional wetlands on potential sites would be as described for Alternative A-1.

#### **4.9.4.2       *Impacts from Operation***

VA BHHCS would continue to maintain the Hot Springs Campus, although health care operations would not be offered at this location. There are no floodplains or wetlands on the campus that could be impacted regardless of continued maintenance.

Operations of a CBOC, MSOC, and RRTP at new locations in Hot Springs and Rapid City would not impede flood flows or affect floodplains or wetlands. Impacts to floodplains and wetlands would be addressed during the design and construction phases of the buildings at the selected sites.

## **4.9.5 Alternative C**

### **4.9.5.1 Impacts from Construction**

There are no floodplains or wetlands on the VA Hot Springs Campus that could be impacted, regardless of renovations and modifications proposed to campus buildings under Alternative C.

No construction is proposed elsewhere in Hot Springs under this alternative so floodplains and wetlands would not be affected.

Potential impacts to floodplains and wetlands from construction of an MSOC proposed for Rapid City would be similar to the impacts described for Alternative A. Because only a 10-acre site is proposed instead of a larger site to co-locate an RRTP, the extent of any construction-related impact on floodplains and wetlands could be less than Alternative A-1, but would depend on the location and features of the selected site. The process for identifying and minimizing impacts to any jurisdictional wetlands on potential sites would be as described for Alternative A-1.

### **4.9.5.2 Impacts from Operation**

Health care operations and building maintenance would continue at the VA Hot Springs Campus. There are no floodplains or wetlands on the campus that could be impacted regardless of continued operations and maintenance.

Operations of an MSOC at a new location in Rapid City would not impede flood flows or affect floodplains or wetlands. Impacts to floodplains and wetlands would be addressed during the design and construction phases of the buildings at the selected site.

## **4.9.6 Alternative D**

### **4.9.6.1 Impacts from Construction**

There are no floodplains or wetlands on the VA Hot Springs Campus that could be impacted (note that no construction on the campus is proposed under Alternative B).

Potential impacts to floodplains and wetlands from construction in Hot Springs and Rapid City would be similar to the impacts described for Alternative A. It is anticipated a suitable site of 11 to 13 acres would be available outside the 100-year floodplain in the Hot Springs area to co-locate a CBOC and 24-bed RRTP with a fire station; thus, construction activities would not impede flood flows or impact the floodplain or wetlands. Although the RRTP proposed for Rapid City would be smaller than Alternative A, the size of the site (14 to 17 acres) to co-locate the RRTP and MSOC would be similar. The extent of any construction-related impact on floodplains and wetlands in Rapid City would depend on the location and features of the selected site. The process for identifying and minimizing impacts to any jurisdictional wetlands on potential sites would be as described for Alternative A-1.

#### **4.9.6.2      *Impacts from Operation***

VA would continue to maintain the Hot Springs Campus, although health care operations would no longer be offered there. There are no floodplains or wetlands on the campus that could be impacted regardless of continued maintenance.

Operations of a CBOC and RRTP with a fire station at a different location in Hot Springs and an MSOC and RRTP at a new location in Rapid City would not impede flood flows or affect floodplains or wetlands. Impacts to floodplains and wetlands would be addressed during the design and construction phases of the buildings at the selected sites.

### **4.9.7      *Alternative E***

#### **4.9.7.1      *Impacts from Construction***

There are no floodplains or wetlands on the VA Hot Springs Campus that could be affected, regardless of renovations and modifications to campus buildings and construction of additional buildings proposed under Alternative E.

Potential impacts to floodplains and wetlands from construction of an MSOC proposed for Rapid City would be similar to the impacts described for Alternative B. Because only a 10-acre site is proposed instead of a larger site to co-locate an RRTP, the extent of any construction-related impact on floodplains and wetlands could be less than Alternative A-1, but would depend on the location and features of the selected site. The process for identifying and minimizing impacts to any jurisdictional wetlands on potential sites would be as described for Alternative A-1.

#### **4.9.7.2      *Impacts from Operation***

Health care operations would continue at the VA Hot Springs Campus. There are no floodplains or wetlands on the campus that could be impacted regardless of expanded operations and maintenance.

Operation of an MSOC at a new location in Rapid City would not impede flood flows or affect floodplains or wetlands. Impacts to floodplains and wetlands would be addressed during the design and construction phases of the buildings at the selected sites..

### **4.9.8      *Alternative F***

#### **4.9.8.1      *Impacts from Construction***

There are no floodplains or wetlands on the VA Hot Springs Campus that could be impacted, regardless of upgrades and renovations over time to buildings to maintain clinical standards.

The existing CBOC in Rapid City is not within any floodplain, and there would be no changes that would affect nearby floodplains or wetlands. If space is leased in a different location for a CBOC upon the expiration of the current lease, it is anticipated that the different location in Rapid City and any interior modifications to the building would be in compliance with floodplain ordinances.



#### **4.9.8.2      *Impacts from Operation***

Health care operations and maintenance would continue at the VA Hot Springs Campus without major exterior modifications or additions to existing buildings. There are no floodplains or wetlands on the campus that could be impacted regardless of continued operations and maintenance.

There would be no changes to health care operations in Rapid City that would have any effect on floodplains or wetlands.

### **4.9.9      Supplemental Alternative G**

#### **4.9.9.1      *Impacts from Construction***

There are no floodplains or wetlands on the VA Hot Springs Campus that could be impacted, regardless of possible renovations and modifications to campus buildings or construction of additional buildings to support a selected full or partial re-use of the campus.

#### **4.9.9.2      *Impacts from Operation***

There are no floodplains or wetlands on the VA Hot Springs Campus that could be impacted, regardless of the possible operational requirements of a selected full or partial re-use of the campus.

## 4.10 Socioeconomics

### 4.10.1 Evaluation Criteria

The socioeconomic analysis considers the economic conditions of the VA BHHCS service area in terms of population, housing, income, employment, and labor force. The evaluation includes a qualitative and quantitative analysis of various sources of data to predict reconfiguration-related impacts within the service area, with specific focus on Fall River County and Pennington County as the locations where the reconfiguration proposal would be implemented. An impact would be considered adverse if the reconfiguration would result in any of the following conditions:

- Displace populations, residents, or businesses to accommodate construction
- Generate an economic loss or gain on affected communities or surrounding area without the capacity to absorb a decrease or increase
- Place a demand on suitable housing that exceeds availability
- Induce growth without adequate supporting infrastructure

The intensity of socioeconomic impacts can be determined by analyzing fluctuations in employment. Such an analysis provides a threshold beyond which changes in employment would noticeably affect individuals and communities in other areas such as housing, community services, schools, and revenues. Based on the trend in employment (see Table 3.10-5) shown in Figure 4.10-1, the average annual change calculated for Fall River County is -4.4 percent, with deviation between the annual change and average annual change ranging from 3.7 percent (difference between -4.4 and -0.7 percent) and -9.5 percent (difference between -4.4 and -13.9 percent). These threshold values represent the range within which Fall River County would have the capacity to absorb increases or decreases in socioeconomic conditions, based on what changes Fall River County has had in the past. Since the county has recently absorbed a decline in employment of 13.9%, then, under these threshold values, a major impact for Fall River County would be an increase greater than 3.7 percent or an additional decline of more than 9.5 percent. VA also recognizes that a decline in employment of over 13% within the past two years has itself presented challenges to the area's ability to absorb additional decreases; this is discussed further in Section 4.16 as part of the cumulative impact analysis). Similarly for Pennington County, the average annual change is 0.3 percent with the deviation ranging from 1.7 percent (difference between 0.3 and 2.0 percent) and -1.7 percent (difference between 0.3 and -2.0 percent). Therefore, a major impact for Pennington County would be an increase greater than 1.7 percent or a decline more than 1.7 percent.

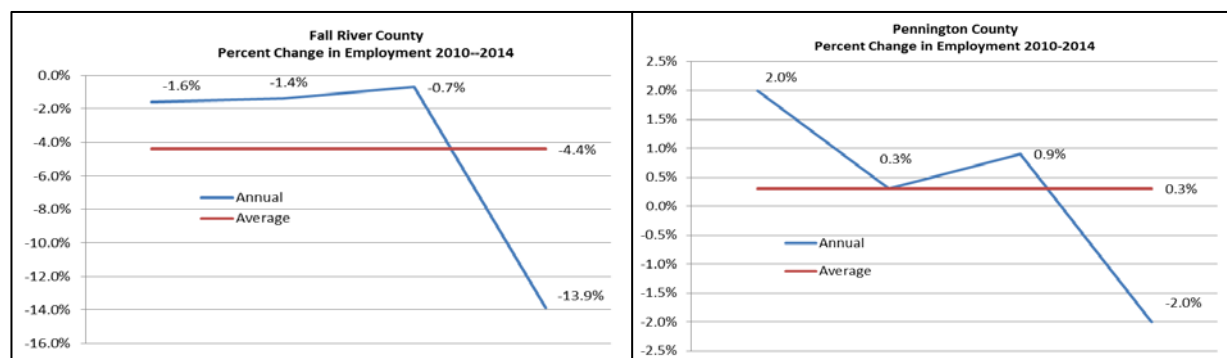


Figure 4.10-1. Employment Trend for Fall River County and Pennington County.

Implementation of any action alternative was estimated to occur over a five-year time period from design to completion. It is important to note that although actual construction activities (site preparation, erection of structures, utilities installations, interior finishes, and landscaping) would probably take between two and three years, the time period used for analysis includes the ramp-up time to construction (site selection and acquisition, plans and designs) and transition time following construction to full operational status of the reconfiguration of services.

It is typical for project estimates to include costs for pre-design planning, architectural and engineering services, site acquisition, construction services, and contingencies. For this analysis, the project estimate is referred to as “construction costs”. It is common for impact analyses to average the construction costs over the entire project time frame to discount the extremes in activity. Using an annual average presents the impacts of a project as a whole versus what the impacts would be during the first year, second year, and so on. Additionally, from a timing perspective, specific details of construction costs are not available on a year-by-year basis prior to completing project designs and bid estimates. The annual average is also the method by which action alternatives can be compared on a consistent basis.

## **4.10.2      Alternative A-1**

### **4.10.2.1      *Impacts from Construction***

Construction of the proposed CBOC in Hot Springs and the proposed MSOC and RRTP in Rapid City was estimated to occur over a five-year time period from design to completion. During this time, there could be short-term impacts to employment, housing, and the local economy primarily connected to the number of construction workers.

The number of construction workers potentially needed to construct or lease facilities was determined by using wages and employee numbers from the construction sector for Fall River County (81 employees) and Pennington County (3,635 employees) (see Table 3.10-7) with the total estimated construction cost. A weighted average annual wage was first calculated using the percentage of construction workers from each county and the wage earned in that county to arrive at \$42,211 per construction worker in the area. This wage would exceed the median household income (see Table 3.10-4) in Fall River County (\$35,833) by approximately 17.8 percent, but it would be 9.9 percent less than the median household income in Pennington County (\$46,849). A weighted average was used because the size of the construction sector in Fall River County alone is unlikely to provide the requisite number and skill of workers to complete the scale of construction proposed for Hot Springs. For example, the general contractor for the new State Veterans Home is based in Pennington County with construction and trade workers coming from outside Fall River County (D. Iverson, Scull Construction Services, personal communication, July 2015). The value of benefits (paid leave, insurance, retirement, social security, etc.) was then added to the weighted average annual wage of \$42,211 to arrive at a total compensation cost. Benefits add 34 percent to the hourly wage for a construction worker (BLS 2015), putting the total compensation per construction worker at \$56,563.

Labor generally accounts for approximately 40 percent of the total construction cost of a project (CLMA 2014). Therefore, the number of construction workers would be determined by dividing the 40 percent labor portion of the project construction cost by the total compensation cost per construction worker. A range of  $\pm 15$  percent and an annual average over the five-year construction

time period are used for analysis purposes. The number of annual average workers is not cumulative but reflects the level of employment that could be required to complete the construction. An annual average was also used for analysis purposes because of the difficulty in determining fluctuations in numbers of workers due to different phases of construction.

Table 4.10-1 shows the total construction cost (JLL 2012a) to build new facilities or lease and renovate existing facilities in Hot Springs and Rapid City for Alternative A-1, and the number of construction workers needed. Leasing and renovating an existing facility generally takes less time to complete than constructing a new facility, but the same five-year time period from design to completion was used for purposes of this analysis.

**Table 4.10-1. Construction Workers Estimated by Facility Construction Cost, Alternative A-1.**

Construction Workers by Facility	Hot Springs		Rapid City	
	New	Lease	New	Lease
CBOC	\$11,070,525	\$642,243	--	--
MSOC, 100-bed RRTP	--	--	\$71,655,425	\$5,626,049
Labor (40% construction cost)	\$4,428,210	\$256,897	\$28,662,170	\$2,250,420
Total compensation per worker	\$56,563	\$56,563	\$56,563	\$56,563
Workers (labor/compensation)	78	5	507	40
Range of workers ( $\pm 15\%$ )	67-90	4-5	431-583	34-46
Annual average of workers over 5 years	13-18	1	86-117	7-10

Source: JLL 2012a (for facility construction cost).

#### 4.10.2.1.1 Hot Springs

The annual average of 13 to 18 construction workers would account for approximately 0.6 percent of the total 2014 employment numbers for Fall River County (see Table 3.10-5). Because the number of annual workers is not cumulative, some of these workers would retain their employment year to year. Although the short-term impact to employment would be beneficial for the local economy, it would be negligible when compared to the evaluation criteria (Section 4.10.1).

There are no general contractors located in Hot Springs that are licensed to construct projects valued greater than \$500,000 (Hot Springs 2013). Therefore, it was assumed that a general contractor available to construct the CBOC would be from outside Fall River County and would provide their own construction workers, but could also use some local construction or trade workers. Research shows that construction workers will commute as much as two hours one way from their residence rather than relocate (EPRI 1982). A general contractor and most construction workers from Pennington County would be within a two-hour commute; thus, impact to the local Hot Springs economy from construction of VA facilities would be primarily from the purchase of construction materials and supplies, gas, and food.

Construction workers residing outside a two-hour commute could occupy local housing or accommodations (hotel, campground/RV park) during the work week, and some could temporarily relocate to Fall River County depending on length of work assignment, current residence, and personal preference. There are 13 hotels in Hot Springs (Hot Springs 2015) and more than 900 housing units available in Fall River County (based on the total number of housing units and

occupancy rate shown in Table 3.10-3). In the unlikely scenario that the 13 to 18 construction workers all occupied housing units, the number of available units would decrease by approximately 2.0 percent. The short-term impact to housing or hotel accommodations would be a minor beneficial impact to the local economy.

There would be no measurable impact to local employment, housing, or the economy from leasing and renovating an existing facility in Hot Springs for a CBOC. An annual average of one construction job would benefit the local economy but the impact would likely be unmeasurable.

#### **4.10.2.1.2 Rapid City**

The annual average of 86 to 117 construction workers would add approximately 0.2 percent to the 2014 employment numbers for Pennington County (see Table 3.10-5). Although the short-term impact to employment would be beneficial for the local economy, it would be negligible when compared to the evaluation criteria.

If a general contractor available to construct the MSOC and RRTP was located in Pennington County, it is assumed that many of the construction workers would also be located in Rapid City or other communities within the county. The 86 to 117 construction workers represent an average increase of 2.8 percent in construction sector employees in Pennington County (see Table 3.10-7). This would be a major increase in the construction sector employment in the county when compared to the evaluation criteria. However, the impact would only be adverse if the existing sector employees from Pennington County would not be available for construction of VA facilities without drawing on workers from nearby counties within a two-hour commute. Any construction workers residing outside a two-hour commute to Rapid City could occupy local housing or accommodations (hotel, campground/RV park) during the work week, or could temporarily relocate to Rapid City depending on length of work assignment, current residence, and personal preference. However, based on the assumption that a general contractor from Pennington County with their local workforce would construct the VA facilities, there would be a relatively low demand on available housing and accommodations. Any impact on the housing market or hotel accommodations from temporary occupancy by construction workers would be beneficial, but the impact would likely be unmeasurable.

Should a general contractor be from outside Pennington County with their own construction workers, there would be a short-term impact on local housing and hotel accommodations. There are over 5,400 hotel rooms in the Rapid City area (Rapid City 2015) and approximately 3,700 housing units available in Pennington County (based on the total number of housing units and occupancy rate shown in Table 3.10-3). If the 86 to 117 construction workers all occupied housing units, the number of available units would decrease by approximately 2.8 percent. This would be considered a major impact, which would be beneficial to the local housing market. Occupancy of approximately 2.0 percent of available hotel rooms would also be considered a major beneficial impact to the hotel industry.

There would be a negligible impact to local employment, housing, or the economy to lease and renovate an existing facility in Rapid City for an MSOC and RRTP. An average annual of 7 to 10 construction workers would likely be available in Pennington County and, although the construction would benefit the local economy, the impact would be negligible.



#### 4.10.2.2 Impacts from Operation

Operational impacts would potentially affect local employment, housing, and income (wages), and ultimately the local economy. Change in the number and location of full-time equivalent employees (FTEEs) would be the primary source of socioeconomic impacts from operating the facilities under Alternative A-1. A change in wages associated with the change in FTEEs could affect local revenue that supports public services benefitting the community. Thus, impacts due to gain or loss in wages are tied to the county of residence of the wage earner and not the location of employment. Impacts to community services are described in Section 4.11.

Table 4.10-2 shows the FY 2014 FTEEs assigned to the VA Hot Springs Campus and Rapid City CBOC by their county of residence and the proposed change in FTEEs to staff and operate the new VA BHHCS facilities in Hot Springs and Rapid City. **For purposes of analysis, the estimated change in FTEEs by county of residence was based strictly on the percentage of the total FY 2014 FTEEs currently assigned to the VA Hot Springs Campus and Rapid City CBOC.** The actual change in FTEEs by county of residence at the time of implementation would result from operational decisions such as staffing needs (nurses, physicians, administrators, and other staff) and staff availability (location, recruitment, retirement, and other factors such as willingness to commute to another VA BHHCS facility). For example, the actual FTEE increase to staff the MSOC and RRTP in Rapid City could be filled by the FTEEs residing in Fall River County instead of new FTEEs residing in Pennington County.

VA BHHCS estimates 464 FTEEs would be eligible for retirement within the service area by FY 2020 (VA 2015). The 387 FTEEs assigned to the VA Hot Springs Campus and Rapid City CBOC combined represent 36.2 percent of the 1,069 total FTEEs in the VA BHHCS. For purposes of this analysis, it is assumed that 168 of the retirement-eligible FTEEs (36.2 percent of 464) would be from VA facilities in Hot Springs and Rapid City. Thus, many of the proposed reductions in FTEEs at the VA Hot Springs Campus could occur as retirements that could happen with or without the reconfiguration.

Implementation of the reconfiguration proposal was estimated to occur over a five-year time period. The gain or loss of FTEEs would be expected to occur over the same period; thus, for analysis purposes, the full gain or loss would be reached by the end of FY 2020.

**Table 4.10-2. Change in Total FTEEs by County of Residence, Alternative A-1.**

FTEE County of Residence	Hot Springs Campus FY 2014		Rapid City CBOC FY 2014		Hot Springs	Rapid City	Change 2014-2020
	FTEEs	% Total	FTEEs	% Total	-290 FTEEs	+98 FTEEs	Total FTEEs
Fall River	266	74.5%	0	0.0%	(216)	0	(216)
Pennington	39	10.9%	26	86.7%	(32)	85	53
Other <sup>1</sup>	52	14.6%	4	13.3%	(42)	13	(29)
Total	357	100.0%	30	100.0%	(290)	98	(192)

<sup>1</sup> Includes other counties within and outside the VA BHHCS service area.  
Source: VA 2015.

An average annual wage was used to determine the gains or losses of total wages associated with the number of FTEEs proposed to staff and operate VA BHHCS facilities in Hot Springs and Rapid

City. This wage was calculated by using the total compensation of VA BHHCS employees for FY 2014, discounting 32 percent to account for benefits, and then dividing by the total number of FTEEs to arrive at an annual average wage of \$65,939 per FTEE. The estimated change in total wages due to the reconfiguration proposal was calculated by county of residence for the FY 2014 FTEEs. The wages for Fall River County, Pennington County, and the other counties within and outside the service area were based strictly on the percentage of the total FTEEs currently assigned to the VA Hot Springs Campus and Rapid City CBOC. For example, Table 4.10-2 shows 266 FTEEs assigned to the Hot Springs Campus who reside in Fall River County. This represents 74.5 percent of the 357 total FTEEs assigned to the campus. Thus, 74.5 percent of the total change in wages associated with the change in FTEEs proposed for the VA Hot Springs Campus would be assumed to affect Fall River County.

Table 4.10-3 shows the changes in wages to operate a new CBOC in Hot Springs and an MSOC and RRTP in Rapid City. Implementation of the reconfiguration proposal was estimated to occur over a five-year time period. The gain or loss of wages would therefore be expected to occur over the same period; thus, for analysis purposes, the full gain or loss would be reached by the end of FY 2020.

**Table 4.10-3. Change in Total Wages by FTEE County of Residence, Alternative A-1.**

FTEE County of Residence	Total Wages FY 2014	Hot Springs -290 FTEEs	Rapid City +98 FTEEs	Change in Wages	Total Wages FY 2020	Change 2014-2020
Fall River	\$16,783,925	(\$14,247,959)	\$0	(\$14,247,959)	\$2,535,966	(84.9%)
Pennington	\$14,510,058	(\$2,088,986)	\$5,600,405	\$3,511,419	\$18,021,477	24.2%
Other <sup>1</sup>	\$39,194,626	(\$2,785,315)	\$861,600	(\$1,923,715)	\$37,270,911	(4.9%)
Total	\$70,488,609	(\$19,122,260)	\$6,462,005	(\$12,660,255)	\$57,828,354	(18.0%)

<sup>1</sup> Includes other counties within and outside the VA BHHCS service area.

Source: VA 2015 (for total FY 2014 wages, FTEEs).

#### 4.10.2.2.1 Hot Springs

A new CBOC in Hot Springs would be staffed with 67 FTEEs, which would result in a reduction of 290 FTEEs from the FY 2014 total of 357 FTEEs. As shown in Table 4.10-2, there would be a reduction of 216 FTEEs residing in Fall River County over the five-year implementation time period. This would represent a decrease of 7.5 percent in employment in Fall River County (see Table 3.10-5). In comparison, if all of the FTEEs on the Hot Springs Campus lived in the City of Hot Springs, this would represent a decrease of 13.1 percent in employment for the local Hot Springs community (see Section 3.10.2.5). There would be a similar increase in the unemployment rate in Fall River County (see Table 3.10-6) from 4.6 to 11.8 percent if all 216 FTEEs became unemployed and remained in the labor force (and an increase in unemployment in Hot Springs from 2.1% in 2014 to 15.2%) (see Section 3.10.2.5). This change in Fall River County and local Hot Springs employment levels assumes none of the 216 FTEE reductions would occur via retirement, early retirement, buy-out, or a transfer to another position within the VA BHHCS service area. Such a reduction in employment and an increase in the unemployment rate would be adverse, and potentially significantly adverse, on the local community of Hot Springs. However, VA has stated that no VA employees would lose VA employment, even though they may need to fill a different job with retraining as needed. For those Hot Springs FTEEs that could not be transitioned to Rapid City, other options could include eligible retirements, early retirements, buy-outs, and voluntary separations. Assuming the same distribution of FTEEs by county of residence, 116 of the 168

retirement-eligible FTEEs could reside in Fall River County. Thus, more than half of the FTEE reduction (116 of 216) could occur through retirement, with an overall decrease in Fall River County employment of 3.5 percent. There would be a similar increase in the unemployment rate from 4.6 to 7.9 percent if the other 100 FTEEs (216 minus 116) became unemployed and remained in the labor force. . Finally, as discussed in Section 4.10.9, it is VA's intention is to rigorously pursue a campus re-use option, in combination with Alternatives A-1 and A-2 through D; a suitable re-use would also help reduce unemployment effects as it would create new employment opportunities for existing staff.

The reduction in FTEEs could have an effect on available housing and occupancy if the FTEEs relocated away from Fall River County. The reduction of 216 FTEEs would decrease the occupancy rate by 5.2 percentage points from 78.1 percent (see Table 3.10-3) to 72.9 percent. The reduction could be less (2.4 percentage points) if those FTEEs eligible for retirement remained in Fall River County or if the other FTEEs gained employment within commuting distance of their residences. A reduction in housing occupancy would be adverse; however, the impact would be considered minor (with retirements) to moderate (without retirements).

As shown in Table 4.10-3, wages of FTEEs residing in Fall River County would decrease by 84.9 percent over the five-year implementation time period. The reduction of \$14.25 million in VA wages would represent a decrease of 18.6 percent in the total wages of \$76.7 million for Fall River County (see Table 3.10-7), which would be a major impact; the potential impacts to the local community of Hot Springs would be expected to be larger. The wage reduction impacts could be partially offset if some staff elect to transition to Rapid City MSOC, while continuing to reside in the Hot Springs area, and/or elect to retire. Retirement alone could reduce the lost wages by as much as \$7.65 million (116 FTEEs x \$65,939 annual wage), assuming the retired FTEEs would retain their current wages, less if their retired income was less than their current income level. Therefore, the total reduction with retirements could be as high as \$6.6 million, which represents a decrease of 8.6 percent in total county wages. The reduction in wages would be considered adverse, but not as large an impact if there were no retirement option.

#### **4.10.2.2.2 Rapid City**

A new MSOC and RRTP in Rapid City would be staffed with 128 FTEEs, which would result in an additional 98 FTEEs from the FY 2014 total of 30 FTEEs. As shown in Table 4.10-2, there would be an increase of 53 FTEEs residing in Pennington County over the five-year implementation time period. This would represent a negligible change (0.1 percent increase) in employment in Pennington County (see Table 3.10-5) and a similar change in the unemployment rate. This change in Pennington County employment assumes none of the 53 FTEE additions would be filled by existing FTEEs residing in Fall River County. Assuming the same distribution of FTEEs by county of residence, 28 of the 168 retirement-eligible FTEEs could reside in Pennington County and would need to be replaced to operate the VA facilities in Rapid City. Any impact on Pennington County employment would be negligible regardless if the retirement-eligible FTEEs remained in the labor force.

The increase in FTEEs could affect available housing and occupancy. The increase of 53 FTEEs in Pennington County would increase the occupancy rate by 0.1 percentage points from 91.8 percent (see Table 3.10-3) to 91.9 percent. Any further increase would be negligible if those FTEEs eligible for retirement remained in Pennington County and replacement FTEEs resided in or within

commuting distance of the county. Although an increase in housing occupancy would be beneficial, the impact would be considered negligible.

As shown in Table 4.10-3, wages of FTEEs residing in Pennington County would increase by 24.2 percent over the five-year implementation time period. On its own, this increase in wages from VA employment would be a major impact. However, as a percent of the total wages of \$2.09 billion for Pennington County (see Table 3.10-7) the increase of \$3.51 million (0.2 percent) in VA wages would be beneficial but negligible.

#### 4.10.2.2.3 Other Counties

VA BHHCS employees reside in 20 other counties in addition to Fall River County and Pennington County. The other counties include 12 within the service area (9 South Dakota counties, 2 Nebraska counties, and 1 Wyoming county), and 8 outside the service, with the majority of the FTEEs residing in the South Dakota counties of Lawrence and Meade. There would be a reduction of 29 FTEEs residing in these other counties with an estimated reduction of \$1.92 million (-4.9 percent) in VA wages (see Tables 4.10-2 and 4.10-3) to implement Alternative A in Hot Springs and Rapid City.

There would not likely be measurable changes in employment in these other counties because of the size of the total labor force (see Table 3.10-5), and no measurable change in the unemployment rate regardless if all 29 FTEEs became unemployed and remained in the labor force. Of the 168 retirement-eligible FTEEs assigned to the VA Hot Springs Campus and Rapid City CBOC, 24 FTEEs would reside in these other counties. Thus, almost all of the FTEE reduction (24 of 29) proposed to implement the reconfiguration could occur through retirement, with an unmeasurable impact on employment, housing, and wages in these other counties.

### 4.10.3 Alternative A-2

#### 4.10.3.1 Impacts from Construction

Table 4.10-4 shows the total construction cost (JLL 2012a) to build new facilities or lease and renovate existing facilities in Hot Springs and Rapid City for Alternative A-1, and the number of construction workers needed. Leasing and renovating an existing facility generally takes less time to complete than constructing a new facility, but the same five-year time period from design to completion was used for purposes of this analysis.

**Table 4.10-4. Construction Workers Estimated by Facility Construction Cost, Alternative A-2.**

Construction Workers by Facility	Hot Springs		Rapid City	
	New	Lease	New	Lease
CBOC	\$11,446,233	Not Applicable	--	--
MSOC, 100-bed RRTP	--	NA	\$71,655,425	\$5,626,049
Labor (40% construction cost)	\$4,578,493	NA	\$28,662,170	\$2,250,420
Total compensation per worker	\$56,563	NA	\$56,563	\$56,563
Workers (labor/compensation)	81	NA	507	40
Range of workers ( $\pm 15\%$ )	70-93	NA	431-583	34-46

Construction Workers by Facility	Hot Springs		Rapid City	
	New	Lease	New	Lease
Annual average of workers over 5 years	14-19	NA	86-117	7-10

Source: JLL 2012a (for facility construction cost).

#### 4.10.3.1.1 Hot Springs

Under Alternative A-2, the CBOC would be included in a newly renovated Building 12 on the existing Hot Springs Campus. The estimated renovation costs, and associated construction workforce requirements, would be essentially identical to that required for Alternative A-1 where a new CBOC would be constructed off campus in Hot Springs - 14-19 workers under Alternative A-2 compared to 13-18 under Alternative A-1. There also would be no CBOC lease option in Alternative A-2, which were determined to be negligible under Alternative A-1 given the need for an average of only one construction worker. As a result, the socioeconomic impacts from renovation activities in Hot Springs would be the same as those CBOC construction impacts described for Alternative A-1.

Although the short-term impact to employment would be beneficial for the local economy, it would be negligible when compared to the evaluation criteria (Section 4.10.1). In the unlikely scenario that the 14 to 19 construction workers all occupied housing units, the number of available units would decrease by approximately 2.0 percent. The short-term impact to housing or hotel accommodations would be a minor beneficial impact to the local economy.

#### 4.10.3.1.2 Rapid City

Alternative A-2 would involve the same MSOC and RRTP construction activities in Rapid City and require the same number of construction workers as in Alternative A-1. Therefore, the socioeconomic impacts from construction activities in Rapid City under Alternative A-2 would be the same as those described for Alternative A-1.

The annual average of 86 to 117 construction workers would add approximately 0.2 percent to the 2014 employment numbers for Pennington County (see Table 3.10-5). Although the short-term impact to employment would be beneficial for the local economy, it would be negligible when compared to the evaluation criteria.

Based on the assumption that a general contractor from Pennington County with their local workforce would construct the VA facilities, there would be a relatively low demand on available housing and accommodations. Any impact on the housing market or hotel accommodations from temporary occupancy by construction workers would be beneficial, but the impact would likely be unmeasurable.

Should a general contractor be from outside Pennington County with their own construction workers, there would be a short-term impact on local housing and hotel accommodations. If the 86 to 117 construction workers all occupied housing units, the number of available units would decrease by approximately 2.8 percent. This would be considered a major impact, which would be beneficial to the local housing market. Occupancy of approximately 2.0 percent of available hotel rooms would also be considered a major beneficial impact to the hotel industry.



There would be a negligible impact to local employment, housing, or the economy to lease and renovate an existing facility in Rapid City for an MSOC and RRTP. An average annual of 7 to 10 construction workers would likely be available in Pennington County and, although the construction would benefit the local economy, the impact would be negligible.

#### **4.10.3.2      *Impacts from Operation***

Operational impacts would potentially affect local employment, housing, and income (wages), and ultimately the local economy. Change in the number and location of full-time equivalent employees (FTEEs) would be the primary source of socioeconomic impacts from operating the facilities under Alternative A-2. A change in wages associated with the change in FTEEs could affect local revenue that supports public services benefitting the community. Thus, impacts due to gain or loss in wages are tied to the county of residence of the wage earner and not the location of employment. Impacts to community services are described in Section 4.11.

##### **4.10.3.2.1      Hot Springs**

The FTEEs to operate a renovated Building 12 as a CBOC would be the same as to operate a new CBOC under Alternative A-1. The VA Hot Springs Campus would be staffed with 67 FTEEs, which would result in a reduction of 290 FTEEs from the FY 2014 total of 357 FTEEs. As shown in Table 4.10-2, there would be a reduction of 216 FTEEs residing in Fall River County over the five-year implementation time period. Reductions in FTEEs and wages would have the same impacts on local employment, housing, income, and the economy as the impacts described for Alternative A-1.

##### **4.10.3.2.2      Rapid City**

Operation of a new MSOC and RRTP in Rapid City would be staffed 128 FTEEs, which would result in an additional 98 FTEEs from the FY 2014 total of 30 FTEEs. The increase in FTEEs and wages to operate a new MSOC and RRTP would be the same as Alternative A-1, so impacts on employment, housing, income, and the economy would be the same as described for Alternative A-1.

##### **4.10.3.2.3      Other Counties**

The reduction in FTEEs and wages in the other counties throughout the VA BHHCS service area would be the same as Alternative A-1, so impacts on employment, housing, income, and the economy would be the same as described for Alternative A-1.

#### **4.10.4      Alternative B**

##### **4.10.4.1      *Impacts from Construction***

Construction of the proposed CBOC and RRTP in Hot Springs and the proposed MSOC in Rapid City is estimated to occur over a five-year time period from design to completion. During this time, there could be short-term impacts to employment, housing, and the local economy primarily connected to the number of construction workers.

Table 4.10-5 shows the total construction cost (JLL 2012a) to build new facilities or lease and renovate existing facilities in Hot Springs and Rapid City for Alternative B, and the annual average number of construction workers needed over the five-year time period.

**Table 4.10-5. Construction Workers Estimated by Facility Construction Cost, Alternative B.**

Construction Workers by Facility	Hot Springs		Rapid City	
	New	Lease	New	Lease
CBOC, 100-bed RRTP, fire station	\$44,292,636	\$3,938,441	--	--
MSOC	--	--	\$42,026,299	\$2,547,131
Labor (40% construction cost)	\$17,717,054	\$1,575,376	\$16,810,520	\$1,018,852
Total compensation per worker	\$56,563	\$56,563	\$56,563	\$56,563
Workers (labor/compensation)	313	28	297	18
Range of workers ( $\pm 15\%$ )	266-360	24-32	253-342	15-21
Annual average of workers over 5 years	53-72	5-6	51-68	3-4

Source: JLL 2012a (for facility construction cost).

#### 4.10.4.1.1 Hot Springs

Construction of new facilities would have similar effects on local housing and accommodations as described for Alternative A-1, but the effects would be much greater because of the larger Hot Springs construction workforce.

The annual average of 53 to 72 construction workers would add approximately 2.2 percent to the 2014 employment numbers for Fall River County (see Table 3.10-5). Although the short-term impact to employment would benefit the local economy, it would be minor when compared to the evaluation criteria. A general contractor with their own construction workforce would be from outside Fall River County, but could also use some local construction or trade workers. Construction workers residing outside a two-hour commute from Hot Springs could occupy local housing or accommodations during the work week, and some could temporarily relocate to Fall River County depending on length of work assignment, current residence, and personal preference. Assuming the 53 to 72 construction workers all occupied housing units, the number of available units would decrease by an average of approximately 7.0 percent, a moderate short-term beneficial to the local housing market and economy. The more likely scenario would be far fewer workers occupying housing, with a smaller short-term beneficial impact.

Leasing and renovating existing facilities would have similar effects on local housing and accommodations as constructing new facilities described for Alternative A-1. However, the extent of the effects would be less because a smaller construction workforce would be needed for renovations as compared to new construction.

#### 4.10.4.1.2 Rapid City

Construction would have similar effects on local employment, housing and accommodations, and the economy as described for Alternative A, but the extent of the effects would be less because of the smaller construction workforce needed for Alternative B.

The annual average of 51 to 68 construction workers would add approximately 0.1 percent to the 2014 employment numbers for Pennington County (see Table 3.10-5). Although the short-term impact to employment would benefit the local economy, it would be minor.

Based on the assumption that a general contractor from Pennington County would construct the MSOC, there would be relatively low to no demand on available housing and accommodations because the general contractor's workforce would likely reside within a two-hour commute.

The housing market and hotel accommodations would benefit from temporary occupancy by construction workers should the general contractor and their workforce be from outside Pennington County and reside more than two hours from Rapid City. In the unlikely scenario that the 51 to 68 construction workers all occupied housing units, the number of available units would decrease by approximately 2.0 percent. The short-term impact to housing availability would be considered major when compared to the evaluation criteria, but would benefit the local housing market and economy. Occupancy of approximately 1.0 percent of available hotel rooms would be a moderate beneficial impact to the hotel industry and local economy.

Leasing and renovating an existing facility for an MSOC would have similar effects on local housing and accommodations as described for Alternative A, but the extent of the effects would be less because a smaller construction workforce would be needed for renovations for Alternative B.

#### 4.10.4.2 Impacts from Operation

Table 4.10-6 shows the FY 2014 FTEEs assigned to the VA Hot Springs Campus and Rapid City CBOC by their county of residence and the proposed change in FTEEs to staff and operate the new VA BHHCS facilities in Hot Springs and Rapid City for Alternative B. The assumptions used for analysis are the same as described in Section 4.10.2.2 for Alternative A-1.

**Table 4.10-6. Change in Total FTEEs by County of Residence, Alternative B.**

FTEE County of Residence	Hot Springs Campus FY 2014		Rapid City CBOC FY 2014		Hot Springs	Rapid City	Change 2014-2020
	FTEEs	% Total	FTEEs	% Total	-218 FTEEs	+26 FTEEs	Total FTEEs
Fall River	266	74.5%	0	0.0%	(162)	0	(162)
Pennington	39	10.9%	26	86.7%	(24)	23	(1)
Other <sup>1</sup>	52	14.6%	4	13.3%	(32)	3	(29)
Total	357	100.0%	30	100.0%	(218)	26	(192)

<sup>1</sup> Includes other counties within and outside the VA BHHCS service area.

Source: VA 2015.

Table 4.10-7 shows the changes in wages to operate a new CBOC and RRTP in Hot Springs and an MSOC in Rapid City. The assumptions used for analysis are the same as described in Section 4.10.2.2 for Alternative A-1.

**Table 4.10-7. Change in Total Wages by FTEE County of Residence, Alternative B.**

FTEE County of Residence	Total Wages FY 2014	Hot Springs -218 FTEEs	Rapid City +26 FTEEs	Change in Wages	Total Wages FY 2020	Change 2014-2020
Fall River	\$16,783,925	(\$10,710,535)	\$0	(\$10,710,535)	\$6,073,390	(63.8%)
Pennington	\$14,510,058	(\$1,570,342)	\$1,485,822	(\$84,520)	\$14,425,538	(0.6%)
Other <sup>1</sup>	\$39,194,626	(\$2,093,789)	\$228,588	(\$1,865,201)	\$37,329,425	(4.8%)
Total	\$70,488,609	(\$14,374,666)	\$1,714,410	(\$12,660,256)	\$57,828,353	(18.0%)

<sup>1</sup> Includes other counties within and outside the VA BHHCS service area.

Source: VA 2015 (for total FY 2014 wages, FTEEs).

#### 4.10.4.2.1 Hot Springs

A new CBOC and 100-bed RRTP in Hot Springs would be staffed with 139 FTEEs, which would result in a reduction of 218 FTEEs from the FY 2014 total of 357 FTEEs. As shown in Table 4.10-5, there would be a reduction of 162 FTEEs residing in Fall River County over the five-year implementation time period. This would represent a decrease of 5.6 percent in employment in Fall River County (see Table 3.10-5). There would be a similar increase in the unemployment rate (see Table 3.10-6) from 4.6 to 10.0 percent if all 162 FTEEs became unemployed and remained in the labor force. Assuming the same distribution of FTEEs by county of residence, 116 of the 168 retirement-eligible FTEEs could reside in Fall River County. Thus, almost three-fourths of the FTEE reduction (116 of 162) could occur through retirement, with a smaller impact on Fall River County employment of -1.6 percent. There would be a similar increase in the unemployment rate from 4.6 to 6.1 percent if the other 46 FTEEs (162 minus 116) became unemployed and remained in the labor force. This change in Fall River County employment none of the 162 FTEE reductions would occur via retirement, early retirement, buy-out, or a transfer another position within the VA BHHCS service area. A reduction in employment and an increase in the unemployment rate would be adverse; however, the impact would be reduced with retirement options factored in, and would be less than the impact described for Alternative A-1.

The reduction in FTEEs could have an effect on available housing and occupancy. The reduction of 162 FTEEs in Fall River County would decrease the occupancy rate by 3.9 percentage points from 78.1 percent (see Table 3.10-3) to 74.2 percent. The reduction could be less (1.1 percentage points) if those FTEEs eligible for retirement remained in Fall River County or the other FTEEs remained employed within commuting distance of their residences. Although a reduction in housing occupancy would be adverse, the impact would be considered minor (with or without retirements).

As shown in Table 4.10-6, wages of FTEEs residing in Fall River County would decrease by 63.8 percent over the five-year implementation time period. The reduction of \$10.71 million in VA wages would represent a decrease of 14.0 percent in the total wages of \$76.7 million for Fall River County (see Table 3.10-7), which would be a major impact. If the FTEE reduction is partially met by not replacing FTEEs eligible for retirement, the reduction in wages due to the proposal would be smaller by approximately \$7.65 million (116 FTEEs x \$65,939 annual wage), since it was assumed the retired FTEEs would have no additional wages. The total reduction with retirements would therefore be \$3.06 million, which would represent 4.0 percent of the total county wages. Although the reduction of wages would be adverse, the impact would be less with retirement wages factored in and less than the impact described for Alternatives A-1.

#### 4.10.4.2.2 Rapid City

A new MSOC in Rapid City would be staffed with 56 FTEEs, which would result in an additional 26 FTEEs from the FY 2014 total of 30 FTEEs. As shown in Table 4.10-5, there would be a reduction of one FTEE residing in Pennington County over the five-year implementation time period, which would have no effect to employment or to the unemployment rate in Pennington County. Assuming the same distribution of FTEEs by county of residence, 28 of the 168 retirement-eligible FTEEs could reside in Pennington County and would need to be replaced to operate the VA facilities in Rapid City. This change in Pennington County employment assumes the one FTEE addition and retirement-eligible FTEEs would not be filled by existing FTEEs residing in Fall River County. Any impact on Pennington County employment would be unmeasurable regardless if the retirement-eligible FTEEs remained in the labor force.

The reduction of one FTEE would not affect available housing or the occupancy rate. Any effect would be negligible if those FTEEs eligible for retirement remained in Pennington County and replacement FTEEs resided in or within commuting distance of the county.

As shown in Table 4.10-6, wages of FTEEs residing in Pennington County would decrease by 0.6 percent over the five-year implementation time period. This reduction of \$84,520 in wages from VA employment would be negligible as a percent of the total wages of \$2.09 billion for Pennington County, and would be essentially offset if the FTEE reduction is met by not replacing an FTEE eligible for retirement.

#### 4.10.4.2.3 Other Counties

There would be a reduction of 29 FTEEs residing in the other counties with an estimated reduction of \$1.87 million (-4.8 percent) in VA wages to implement Alternative B in Hot Springs and Rapid City. The impacts to employment, housing, and wages would be similar to the impacts described for Alternative A-1.

### 4.10.5 Alternative C

#### 4.10.5.1 Impacts from Construction

Renovations to Building 12 and the domiciliary and construction of a new MSOC are estimated to occur over a five-year time period from design to completion. During this time, there could be short-term impacts to employment, housing, and the local economy primarily connected to the number of construction workers.

Table 4.10-8 shows the total construction cost (JLL 2012a) to renovate existing facilities on the VA Hot Springs Campus and build new or lease existing facilities Rapid City for Alternative C, and the average annual number of construction workers needed over the five-year implementation period.

**Table 4.10-8. Construction Workers Estimated by Facility Construction Cost, Alternative C.**

Construction Workers by Facility	Hot Springs		Rapid City	
	Renovate	--	New	Lease
CBOC, 100-bed RRTP	\$46,290,392	--	--	--
MSOC	--	--	\$42,026,299	\$2,547,131



Construction Workers by Facility	Hot Springs		Rapid City	
	Renovate	--	New	Lease
Labor (40% construction cost)	\$18,516,157	--	\$16,810,520	\$1,018,852
Total compensation per worker	\$56,563	--	\$56,563	\$56,563
Workers (labor/compensation)	327	--	297	18
Range of workers ( $\pm 15\%$ )	278-376	--	253-342	15-21
Annual average of workers over 5 years	56-75	--	51-68	3-4

Source: JLL 2012a (for facility construction cost).

#### 4.10.5.1.1 Hot Springs

Renovations to Building 12 and the domiciliary would have similar effects on local employment, housing and accommodations, and the economy as described for constructing new facilities for Alternative B because of the comparable number of annual average construction workers needed to complete the renovations.

#### 4.10.5.1.2 Rapid City

The proposed construction of new facility or lease and renovation of an existing facility for an MSOC would be the same as Alternative B, so impacts on employment, local housing and accommodations, and the economy would be the same as described for Alternative B.

### 4.10.5.2 Impacts from Operations

#### 4.10.5.2.1 Hot Springs

The VA Hot Springs Campus would be staffed with 139 FTEEs, which would result in a reduction of 218 FTEEs from the FY 2014 total of 357 FTEEs. The FTEEs to operate a renovated Building 12 as a CBOC and a renovated domiciliary for a 100-bed RRTP would be the same as Alternative B. Reductions in FTEEs and wages would have the same impacts on local employment, housing, income, and the economy as the impacts described for Alternative B.

#### 4.10.5.2.2 Rapid City

Operation of a new MSOC in Rapid City would be staffed with 56 FTEEs, which would result in an additional 26 FTEEs from the FY 2014 total of 30 FTEEs. The increase in FTEEs and wages to operate a new MSOC would be the same as Alternative B, so impacts on employment, housing, income, and the economy would be the same as described for Alternative B.

#### 4.10.5.2.3 Other Counties

The reduction in FTEEs and wages in the other counties throughout the VA BHHCS service area would be the same as Alternative B, so impacts on employment, housing, income, and the economy would be the same as described for Alternative B.

## 4.10.6 Alternative D

### 4.10.6.1 Impacts from Construction

Construction of the proposed CBOC and 24-bed RRTP in Hot Springs and the proposed MSOC and 76-bed RRTP in Rapid City is estimated to occur over a five-year time period from design to completion. During this time, there could be short-term impacts to employment, housing, and the local economy primarily connected to the number of construction workers.

Table 4.10-9 shows the total construction cost (JLL 2012a) to build new facilities or lease and renovate existing facilities in Hot Springs and Rapid City for Alternative D, and the annual average number of construction workers needed over the five-year implementation period.

**Table 4.10-9. Construction Workers Estimated by Facility Construction Cost, Alternative D.**

Construction Workers by Facility	Hot Springs		Rapid City	
	New	Lease	New	Lease
CBOC, 24-bed RRTP, fire station	\$24,959,425	\$2,268,370	--	--
MSOC, 76-bed RRTP	--	--	\$66,810,520	\$5,109,048
Labor (40% construction cost)	\$9,983,770	\$907,348	\$26,772,303	\$2,043,619
Total compensation per worker	\$56,563	\$56,563	\$56,563	\$56,563
Workers (labor/compensation)	177	16	473	36
Range of workers ( $\pm 15\%$ )	150-203	14-18	402-544	31-42
Annual average of workers over 5 years	30-41	3-4	80-109	6-8

Source: JLL 2012a (for facility construction cost).

#### 4.10.6.1.1 Hot Springs

Construction of new facilities would have similar effects on local employment, housing and accommodations, and the economy as described for Alternative B, but the extent of the effects would be less because of the smaller construction workforce needed for Alternative D.

The annual average of 30 to 41 construction workers would add approximately 1.2 percent to the 2014 employment numbers for Fall River County (see Table 3.10-5). Although the short-term impact to employment would benefit the local economy, it would be minor when compared to the evaluation criteria.

A general contractor with their own construction workforce would be from outside Fall River County, but could also use some local construction or trade workers. Construction workers residing outside a two-hour commuting distance from Hot Springs could occupy local housing or accommodations during the work week, and some could temporarily relocate to Fall River County depending on length of work assignment, current residence, and personal preference. Assuming the 30 to 41 construction workers all occupied housing units, the number of available units would decrease by an average of approximately 4.0 percent, a moderate short-term beneficial impact to the local housing market and economy. The more likely scenario would be far fewer workers occupying housing, with a smaller short-term beneficial impact.

Leasing and renovating existing facilities would have similar effects on local employment, housing and accommodations, and the economy as described for Alternative B, but the extent of the effects could be slightly less because a smaller construction workforce would be needed for renovations.

#### 4.10.6.1.2 Rapid City

The proposed construction of new facilities or lease and renovation of existing facilities would have similar effects on local employment, housing and accommodations, and the economy as described for Alternative A-1, but the extent of the effects could be slightly less because of the slightly smaller construction workforce needed for Alternative D.

#### 4.10.6.2 Impacts from Operation

Table 4.10-10 shows the FY 2014 FTEEs assigned to the VA Hot Springs Campus and Rapid City CBOC by their county of residence and the proposed change in FTEEs to staff and operate the new VA BHHCS facilities in Hot Springs and Rapid City for Alternative D. The assumptions used for analysis are the same as described in Section 4.10.2.2 for Alternative A-1.

**Table 4.10-10. Change in Total FTEEs by County of Residence, Alternative D.**

FTEE County of Residence	Hot Springs Campus FY 2014		Rapid City CBOC FY 2014		Hot Springs	Rapid City	Change 2014-2020
	FTEEs	% Total	FTEEs	% Total	-270 FTEEs	+88 FTEEs	Total FTEEs
Fall River	266	74.5%	0	0.0%	(201)	0	(201)
Pennington	39	10.9%	26	86.7%	(30)	76	46
Other <sup>1</sup>	52	14.6%	4	13.3%	(39)	12	(27)
Total	357	100.0%	30	100.0%	(270)	88	(182)

<sup>1</sup> Includes other counties within and outside the VA BHHCS service area.

Source: VA 2015.

Table 4.10-11 shows the changes in wages to operate a new CBOC and 24-bed RRTP in Hot Springs and an MSOC and 76-bed RRTP in Rapid City. The assumptions used for analysis are the same as described in Section 4.10.2.2 for Alternative A-1.

**Table 4.10-11. Change in Total Wages by FTEE County of Residence, Alternative D.**

FTEE County of Residence	Total Wages FY 2014	Hot Springs -270 FTEEs	Rapid City +88 FTEEs	Change in Wages	Total Wages FY 2020	Change 2014-2020
Fall River	\$17,930,497	(\$13,265,341)	\$0	(\$13,265,341)	\$3,518,584	(79.0%)
Pennington	\$14,369,104	(\$1,944,918)	\$5,028,935	\$3,084,016	\$17,594,074	(21.3%)
Other <sup>1</sup>	\$38,189,008	(\$2,593,225)	\$773,682	(\$1,819,542)	\$37,375,084	(4.6%)
Total	\$70,488,609	(\$17,803,484)	\$5,802,617	(\$12,000,867)	\$58,487,742	(17.0%)

<sup>1</sup> Includes other counties within and outside the VA BHHCS service area.

Source: VA 2015 (for total FY 2014 wages, FTEEs).

#### 4.10.6.2.1 Hot Springs

A new CBOC and 24-bed RRTP in Hot Springs would be staffed with 87 FTEEs, which would result in a reduction of 270 FTEEs from the FY 2014 total of 357 FTEEs. As shown in Table 4.10-9, there would be a reduction of 201 FTEEs residing in Fall River County over the five-year implementation time period. This would represent a decrease of 7.0 percent in employment in Fall River County. There would be a similar increase in the unemployment rate from 4.6 to 11.3 percent if all 201 FTEEs became unemployed and remained in the labor force. Assuming the same distribution of FTEEs by county of residence, 116 of the 168 retirement-eligible FTEEs could reside in Fall River County. Thus, more than half of the FTEE reduction (116 of 201) could occur through retirement, with an overall decrease in Fall River County employment of 2.9 percent. There would be a similar increase in the unemployment rate from 4.6 to 7.4 percent if the other 85 FTEEs (201 minus 116) became unemployed and remained in the labor force. This change in Fall River County employment assumes none of the 201 FTEE reductions would occur via retirement, early retirement, buy-out, or a transfer to another position within the VA BHHCS service area. A reduction in employment and an increase in the unemployment rate would be adverse; however, the impact would be reduced with retirement options factored in, and would be less than the impact described for Alternative A-1.

The reduction in FTEEs could have an effect on available housing and occupancy if the FTEEs relocated away from Fall River County. The reduction of 201 FTEEs would decrease the occupancy rate by 4.8 percentage points from 78.1 percent to 73.3 percent. The reduction could be less (2.0 percentage points) if those FTEEs eligible for retirement remained in Fall River County or if the other FTEEs gained employment within commuting distance of their residences. A reduction in housing occupancy would be adverse; however, the impact would be considered less with retirement wages factored in and less than the impact described for Alternatives A-1.

As shown in Table 4.10-10, wages of FTEEs residing in Fall River County would decrease by 79.0 percent over the five-year implementation time period. The reduction of \$13.27 million in VA wages would represent a decrease of 17.3 percent in the total wages of \$76.7 million for Fall River County, which would be a major impact. If the FTEE reduction is partially met by not replacing FTEEs eligible for retirement, the reduction in VA wages would be smaller by approximately \$7.65 million (116 FTEEs x \$65,939 annual wage), since it was assumed the retired FTEEs would have no additional wages. The total reduction with retirements would therefore be \$5.62 million, which would amount to 7.3 percent of the total county wages. Although the reduction of VA wages would be adverse, the impact would be considered moderate when compared to the evaluation criteria.

#### 4.10.6.2.2 Rapid City

A new MSOC and 76-bed RRTP in Rapid City would be staffed with 118 FTEEs, which would result in an additional 88 FTEEs from the FY 2014 total of 30 FTEEs. As shown in Table 4.10-9, there would be an increase of 46 FTEEs residing in Pennington County over the five-year implementation period. This would represent a negligible change (0.1 percent increase) in employment in Pennington County, with a similar change in the unemployment rate. This change in Pennington County employment assumes none of the 46 FTEE additions would be filled by existing FTEEs residing in Fall River County. Assuming the same distribution of FTEEs by county of residence, 28 of the 168 retirement-eligible FTEEs could reside in Pennington County and would need to be replaced to operate the VA facilities in Rapid City. Any impact on Pennington County

employment would be negligible regardless if the retirement-eligible FTEEs remained in the labor force.

The increase of 46 FTEEs would have a similar effect on available housing and occupancy as described for Alternative A (increase of 53 FTEEs).

As shown in Table 4.10-10, wages of FTEEs residing in Pennington County would increase by 21.3 percent over the five-year implementation time period. On its own, this increase in wages from VA employment would be a major impact. However, as a percent of the total wages of \$2.09 billion for Pennington County the increase of \$3.08 million (0.1 percent) in VA wages would be beneficial but negligible.

#### 4.10.6.2.3 Other Counties

There would be a reduction of 27 FTEEs residing in the other counties with an estimated reduction of \$1.82 million (-4.6 percent) in VA wages to implement Alternative D in Hot Springs and Rapid City. The impacts to employment, housing, and wages would be similar to the impacts described for Alternative A (29 FTEE reductions, \$1.92 million fewer wages).

### 4.10.7 Alternative E

#### 4.10.7.1 Impacts from Construction

Renovations and additions to Building 12 to expand inpatient/outpatient care, and renovations to the domiciliary and any other potential new construction (e.g., storage, additional housing) are estimated to occur over a five-year time period from design to completion. During this time, there could be short-term impacts to employment, housing, and the local economy primarily connected to the number of construction workers. No construction or renovations are proposed to the CBOC in Rapid City under this alternative.

Table 4.10-12 shows the total construction cost (JLL 2012b) to renovate existing facilities on the VA Hot Springs Campus and build a new MSOC in Rapid City for Alternative E, and the annual average number of construction workers needed over the five-year implementation period.

**Table 4.10-12. Construction Workers Estimated by Facility Construction Cost, Alternative E.**

Construction Workers by Facility	Hot Springs	Rapid City	
	Renovate / Construct	New	Lease
Inpatient/outpatient, 110-160-bed RRTP	\$70,238,209	--	--
MSOC	---	\$42,026,299	\$2,547,131
Labor (40% construction cost)	\$28,095,283	\$16,810,520	\$1,018,852
Total compensation per worker	\$56,563	\$56,563	\$56,563
Workers (labor/compensation)	497	297	18
Range of workers ( $\pm 15\%$ )	432-571	253-342	15-21
Annual average of workers over 5 years	86-114*	51-68	3-4

Source: JLL 2012b (for facility construction cost).

\*Construction workforce numbers have been readjusted to eliminate construction of the new 82-bed facility.



Renovating existing facilities on the VA Hot Springs Campus and the potential for some additional new construction activities would have similar effects on local employment, housing and accommodations, and the economy as described for Alternatives B and C; however, the extent of the effects would be slightly greater because of the larger construction workforce needed for Alternative E.

The annual average of 86 to 114 construction workers would add approximately 3.5 percent to the 2014 employment numbers for Fall River County (see Table 3.10-5). This would be considered a minor short-term beneficial impact to employment when compared to the evaluation criteria.

A general contractor with their own construction workforce would be from outside Fall River County, but could also use some local construction or trade workers. Construction workers residing outside a two-hour commute from Hot Springs could occupy local housing or accommodations during the work week, and some could temporarily relocate to Fall River County depending on length of work assignment, current residence, and personal preference. In the unlikely scenario that the 120 to 163 construction workers all occupied housing units, the number of available units would decrease by an average of approximately 11.0 percent. This would be considered a short-term major impact that would benefit the local housing market and economy. Hotel occupancy rates (South Dakota 2014) indicate that hotels could accommodate an increase in demand, which would also benefit the local economy.

#### 4.10.7.2 Impacts from Operation

Table 4.10-13 shows the FY 2014 FTEEs assigned to the VA Hot Springs Campus and the Rapid City CBOC by their county of residence and the proposed change in FTEEs to staff and operate the expanded facilities on the campus for Alternative E. The assumptions used for analysis are the same as described in Section 4.10.2.2 for Alternative A-1.

Table 4.10-13. Change in Total FTEEs by County of Residence, Alternative E.

FTEE County of Residence	Hot Springs Campus FY 2014		Rapid City CBOC FY 2014		Hot Springs	Rapid City	Change 2014-2020
	FTEEs	% Total	FTEEs	% Total	+135 FTEEs	+26 FTEEs	Total FTEEs
Fall River	266	74.5%	0	0.0%	100	0	100
Pennington	39	10.9%	26	86.7%	15	23	38
Other <sup>1</sup>	52	14.6%	4	13.3%	20	3	23
Total	357	100.0%	30	100.0%	135	26	161

<sup>1</sup> Includes other counties within and outside the VA BHHCS service area.  
Source: VA 2015.

Table 4.10-14 shows the changes in wages to operate the expanded VA Hot Springs Campus and a new MSOC in Rapid City. The assumptions used for analysis are the same as described in Section 4.10.2.2 for Alternative A-1.

**Table 4.10-14. Change in Total Wages by FTEE County of Residence, Alternative E**

<b>FTEE County of Residence</b>	<b>Total Wages FY 2014</b>	<b>Hot Springs +135 FTEEs</b>	<b>Rapid City +26 FTEEs</b>	<b>Change in Wages</b>	<b>Total Wages FY 2020</b>	<b>Change 2014- 2020</b>
Fall River County	\$17,930,497	\$6,631,815	\$0	\$6,631,815	\$24,562,312	37%
Pennington County	\$14,369,104	\$970,292	\$1,485,822	\$2,456,114	\$16,825,218	17%
Other Counties	\$38,189,008	\$1,299,658	\$228,588	\$1,528,246	\$39,717,254	4.0%
Total	\$70,488,609	\$8,901,765	\$1,714,410	\$10,616,175	\$81,104,784	15%

<sup>1</sup> Includes other counties within and outside the VA BHHCS service area.

Source: VA 2015 (for total FY 2014 wages, FTEEs).

#### **4.10.7.2.1 Hot Springs**

An expanded campus in Hot Springs would be staffed with 492 FTEEs, which would result in an additional 135 FTEEs from the FY 2014 total of 357 FTEEs. As shown in Table 4.10-13, there would be an increase of 100 FTEEs residing in Fall River County over the five-year implementation time period. This would represent an increase of 3.5 percent in employment in Fall River County (see Table 3.10-5), which would be a small to moderate impact. There would be a similar decrease in the unemployment rate (see Table 3.10-6) by 3.3 percentage points from 4.6 to 1.3 percent if all new employees were already Fall River County residents. An increase in employment and a decreased unemployment rate would be beneficial to a point, but then could become an adverse impact.

As shown in Table 3.10-6, there were 140 unemployed persons in Fall River County in 2014. In the unlikely scenario those 140 persons could fill the 100 FTEEs needed to implement Alternative E, with only 40 FTEEs remaining unemployed. Assuming the same distribution of FTEEs by county of residence, 116 of the 168 retirement-eligible FTEEs could reside in Fall River County. Thus, an additional (replacement) 116 FTEEs from Fall River County could be needed to implement Alternative E. These 216 FTEEs (100 plus 116) would represent an increase of 7.5 percent in county employment with a similar decrease in the unemployment rate of 7.1 percentage points from 4.6 to -2.5 percent. A negative unemployment rate means there are not enough employable persons available to fill jobs. Generally, an increase in employment and a decrease in the unemployment rate are viewed as beneficial, with beneficial impacts on the local economy (Fall River County and City of Hot Springs). In the event the City of Hot Springs lacked sufficient supporting infrastructure (particularly housing, but also schools and other community services) to absorb the increase, the impacts could turn potentially adverse; similarly, adverse impacts could occur to the city and VA BHHCS if the local labor force does not offer enough capacity in the employment sectors assumed to be needed to implement Alternative E. Insufficient labor capacity could result in competition with other Hot Springs employers for candidates, as well as provide a challenge for VA in staffing positions without relocating people to the area.

The increase in FTEEs could have an effect on available housing and occupancy. The increase of 100 FTEEs in Fall River County would increase the occupancy rate by 2.4 percentage points from 78.1 percent (see Table 3.10-3) to 80.5 percent (assuming one housing unit per employee), which

would be a small to moderate impact. The increase could be greater at 5.7 percentage points (83.8 percent occupancy) if those FTEEs eligible for retirement remained in Fall River County and the additional (replacement) 116 FTEEs preferred or needed to relocate to Hot Springs based on their current location of residence. A major increase in housing occupancy would generally be considered beneficial based on the assumption that available housing units would be suitable and accommodate occupiers' preferences.

As shown in Table 4.10-14, wages of FTEEs residing in Fall River County would increase by 37 percent over the five-year implementation time period. As a percent of the total wages of \$76.7 million for Fall River County (see Table 3.10-7), an increase of \$13.56 million in VA wages would amount to a 8.6 percent increase in the total county wages. The increase in wages would be considered major and beneficial.

#### **4.10.7.2.2 Rapid City**

A new MSOC in Rapid City would be staffed with 56 FTEEs, which would result in an additional 26 FTEEs from the FY 2014 total of 30 FTEEs. As shown in Table 4.10-13, there would be an additional 23 FTEEs residing in Pennington County over the five-year implementation time period. In addition, the increase in FTEEs to implement Alternative E in Hot Springs would have an effect in Pennington County on housing, income, and the local economy. As shown in Table 4.10-13, there would be an additional 15 FTEEs residing in Pennington County over the five-year implementation time period. Because of the retirement-eligible FTEEs, an additional (replacement) 28 FTEEs from Pennington County could be needed to implement Alternative E in Hot Springs. This number of FTEEs would not result in a measurable change in employment in Pennington County or a measurable change in the unemployment rate because of the size of the labor force in the county. The impact on employment and housing would be similar to but less than the impact described for Alternative D (increase of 46 FTEEs).

As shown in Table 4.10-14, wages of FTEEs residing in Pennington County would increase by 17 percent (\$2.46 million) over the five-year implementation time period. The beneficial impact on income (VA wages) and the local economy would be similar to but slightly greater than the impact described for Alternative D (increase of \$1.82 million in wages).

#### **4.10.7.2.3 Other Counties**

There would be an increase of 23 FTEEs residing in counties other than Fall River and Pennington, with an estimated increase of \$1.3 million in wages to implement Alternative E in Hot Springs. Even with the increases, there would not likely be measurable changes in employment in these other counties because of the size of the total labor force, and no measurable change in the unemployment rate. Because of the retirement-eligible FTEEs, an additional (replacement) 24 FTEEs from these other counties could be needed to implement this alternative. These 47 FTEEs (23 plus 24) could slightly increase employment in some of these counties with a similar decrease in the unemployment rate; however, the changes would not likely be measureable but would be beneficial.

The increase in FTEEs in these other counties could increase the housing occupancy rate; however, changes to the rates would not likely be measureable because of the number of available units in these counties (see Table 3.10-3). Although an increase in housing occupancy would be beneficial, the impact would be negligible.

As shown in Table 4.10-14, wages of FTEEs residing in these other counties would increase by 4.0 percent over the five-year implementation time period. This increase in VA wages would be a beneficial impact, and depending on the amount compared against the total wages of a particular county, the impact could be measurable but likely negligible.

## 4.10.8 Alternative F

### 4.10.8.1 Impacts from Construction

Buildings on the VA Hot Springs Campus would be renovated and modified to maintain clinical standards. VA would make effort to maintain the current type and level of health care services, depending on the ability to meet building renovation requirements based on budget and schedule limitations. Renovations would be scheduled under the routine budget process. For purposes of this analysis, it was unrealistic to assume the routine budget process would provide sufficient funds to accomplish the long-term renovations of the “no action alternative” during the same five-year time period proposed to implement an “action alternative” that supports reconfiguration of services within five years. A more realistic time period would be closer to 20 years; however, for this analysis a 10-year time period was used for the baseline by which to compare the action alternatives.

There could be short-term impacts to employment, housing, and the local economy primarily connected to the number of construction workers. No construction or renovations are proposed for the CBOC in Rapid City under this alternative. Table 4.10-15 shows the total construction cost (JLL 2012a) to renovate facilities on the VA Hot Springs Campus for Alternative F, and the annual average number of construction workers needed over a 10-year time period.

**Table 4.10-15. Construction Workers Estimated by Facility Construction Cost, Alternative F.**

Construction Workers by Facility	Hot Springs
	Renovate / Maintain
Inpatient/outpatient, 100-bed RRTP	\$63,184,331
Labor (40% construction cost)	\$25,273,732
Total compensation per worker	\$56,563
Workers (labor/compensation)	447
Range of workers ( $\pm 15\%$ )	380-514
Annual average of workers over 10 years	38-51

Source: JLL 2012a (for facility construction cost).

The annual average of 38 to 51 construction workers would add approximately 1.6 percent to the 2014 employment numbers for Fall River County (see Table 3.10-5). Although the short-term impact to employment would benefit the local economy, it would be minor when compared to the evaluation criteria. Similar to the other alternatives, a general contractor with their own construction workforce would be from outside Fall River County, but could also use some local construction or trade workers. Construction workers residing outside a two-hour commute from Hot Springs could occupy local housing or accommodations during the work week, which would benefit the local economy. In the unlikely scenario that the 38 to 51 construction workers all occupied housing units, the number of available units would decrease by an average of approximately 5.5 percent. This would be considered a short-term moderate impact that would benefit the local housing market and

economy. Hotel occupancy rates (South Dakota 2014) indicate that hotels could accommodate an increase in demand, which would also benefit the local economy.

#### **4.10.8.2      *Impacts from Operation***

Operation of the VA Hot Springs Campus and Rapid City CBOC would continue with the FTEEs assigned to these facilities (see Table 3.10-8). Any changes to employment, housing, and wages for continued operation of these facilities would be negligible.

### **4.10.9      Supplemental Alternative G**

#### **4.10.9.1      *Impacts from Construction***

Supplemental Alternative G involves full or partial re-use of the VA Hot Springs Campus and could only happen with implementation of Alternatives A, B, C, or D. If a potential re-use included renovations or modifications to buildings or construction of additional buildings on the campus, construction-related impacts to local employment, housing and accommodations, and the economy could likely be similar to the impacts described for Alternatives C and E. However, the extent of the impacts would depend on the total construction value of the renovations and modifications, and the time period over which the construction would occur.

#### **4.10.9.2      *Impacts from Operation***

The type of re-use of the VA Hot Springs Campus would determine the extent of effects to employment, housing, income, and ultimately the economy. The extent of any impacts would depend on the scope and scale of the re-use and the employment workforce it would need; however, the impacts could likely be similar to those described for Alternatives C and E.



## 4.11 Community Services

### 4.11.1 Evaluation Criteria

The evaluation of impacts on community services focused on the availability of and demand for educational, medical, public safety and protection, and recreational services. The evaluation involved a qualitative analysis of the operational capacity of and funding for providing such services, with specific focus on Hot Springs and Rapid City as the locations where physical facilities would be changed to implement the reconfiguration proposal. An adverse effect on community services is identified under any of the following conditions:

- Change in the number of users of community services that exceed existing capacity
- Change in the demand for emergency and public protection services that would increase response times based on existing personnel resources and equipment
- Change in the funding needed to sustain services or to increase access to services

The demand for and use of community services is based on the population served; therefore, changes in demand and use depend on changes in that population. The alternatives would change the population through changes in employment. Therefore, the magnitude of impacts on community services can be determined by analyzing fluctuations in employment, as estimated in the analysis for impacts on socioeconomics (see Section 4.10.1 Evaluation Criteria). This analysis provides a threshold beyond which changes in employment would noticeably affect the community. A noticeable impact to community services offered in Hot Springs (based on data for Fall River County) would result from an increase greater than 3.7 percent or a decrease more than 9.5 percent in users, response times, or funding. For Rapid City (based on data for Pennington County) the noticeable impact would be an increase greater than 1.7 percent or a decrease more than 1.7 percent.

A change in wages associated with a change in FTEEs could affect local revenue used to support public services that benefit the community. Thus, impacts due to a gain or loss in wages are tied to the county of residence of the wage earner and not the location of employment. Local government decisions regarding funding for community services generally place a higher priority on public safety and less on recreation or other “non-essential” governmental functions. Decreases in revenues often result in disproportionate reductions in “non-essential” services to allow for the continued adequate funding of public safety and other “essential” services.

### 4.11.2 Alternative A-1

#### 4.11.2.1 Impacts from Construction

Construction of the proposed CBOC in Hot Springs and the proposed MSOC and RRTP in Rapid City could have short-term impacts to public safety and protection services. Construction sites can be sources of accidents involving workers, equipment, and materials; attract theft and vandalism; and create safety hazards for persons not authorized to enter the site. Such incidents would have the potential to increase the number of calls for responses by emergency medical providers, fire departments (FDs), or police departments (PDs). General contractors minimize the occurrence of these types of incidents by properly maintaining construction equipment and implementing “good housekeeping” procedures to prevent fire ignition, educating construction workers in Occupational Safety and Health Administration-required safety standards, and securing and monitoring the

construction site. In addition, the general contractor would be required to follow VA Construction Specification Section 01-35-26 “Safety Requirements” and prepare and implement an accident prevention plan and fire safety plan, and Section 01-00-00 “General Requirements, Construction Security” and prepare a plan to secure the site. With these procedures and plans to manage accident, fire, and security risks, any increase in requests for emergency response by medical, fire, or police would not likely exceed the capacity of these providers in either Hot Springs or Rapid City. The VA Hot Springs FD, through the mutual aid agreement with the Hot Springs Volunteer Fire Department (VFD), would provide firefighting assistance as necessary.

Construction activities that temporarily close or restrict travel lanes or designate a detour, along with slow-moving construction traffic, could potentially affect emergency vehicle (medical, fire, and police) response times. Access to buildings adjacent to the construction sites would be maintained for fire trucks and emergency vehicles; however, construction vehicles and haul trucks near the sites could reduce traffic flows and delay emergency vehicles traveling through the area. Traffic control plans would be prepared and shared with emergency response providers, as required by the local public works/engineering departments in Hot Springs and Rapid City.

The numbers of workers associated with the construction of VA facilities in either community would not likely cause an increase in student enrollment high enough to affect average student-to-staff ratios in the Hot Springs and Rapid City school districts. The estimated yearly average of 13 to 18 construction workers would not be expected to relocate to Hot Springs (see Section 4.10.2.1.1). However, should some of these workers have school-age children and choose to temporarily relocate, the capacity of the Hot Springs School District would not be impacted based on enrollment trends and student-to-staff ratios over the past five years (see Tables 3.11-1 and 3.11-2). The estimated yearly average of 86 to 117 workers that would be needed for construction in Rapid City would likely already reside in the local area (see Section 4.10.2.1.2); thus, there would be no measurable impact on student enrollment in the Rapid City School District. However, should there be a temporary influx of some construction workers with school-age children the capacity of the Rapid City School District would not be impacted based on trends in enrollment and student-to-staff ratios over the past five years (see Tables 3.11-4 and 3.11-5).

The temporary influx of a few construction workers to Hot Springs would not be expected to substantially increase the usage of city parks or place excess demand on recreational facilities. Many of the workers in Rapid City would be expected to already reside in the area; thus, construction-related impacts on parks and recreation facilities would be negligible.

#### **4.11.2.2      *Impacts from Operation***

The reduction of approximately 216 FTEEs whose residence is Fall River County and the addition of 53 FTEEs whose residence is Pennington County (see Table 4.10-2) would reduce VA wages by approximately \$14.25 million in Fall River County and increase VA wages by \$3.51 million in Pennington County (see Table 4.10-3) over the five-year implementation time period. The reduction in VA wages would be moderate when compared to total wages earned in Fall River County and minor when retirement-eligible FTEEs and wages are included (see Section 4.10.2.2.1). The increase in VA wages would be negligible when compare to total wages earned in Pennington County (see Section 4.10.2.2.2). Local sources of funding for FDs, emergency medical services, PDs, schools, and parks are predominantly property and sales taxes. Property taxes would not be affected by reduction in FTEEs and wages because the tax would still be paid regardless if the property is

occupied. The increase in FTEEs in Pennington County would have a negligible impact on housing and thus a negligible impact on property taxes. Fall River County could experience a minor to moderate decrease in sales tax revenue, whereas a negligible increase in sales tax revenue could occur in Pennington County.

The VA Hot Springs Campus is federal government property on federal land owned by VA. It is not defined as “entitlement land” under the *Payments in Lieu of Taxes Act* (31 U.S.C. 69); therefore, Fall River County does not receive federal payments associated with the VA campus to offset losses in property taxes that fund community services.

#### **4.11.2.2.1 Hospitals and Clinics**

The reconfiguration proposal would increase options for Veterans to choose to receive care from non-VA providers at clinics and hospitals in their local communities throughout the VA BHHCS service area. The projected operating cost for non-VA care was estimated to increase approximately 62.2 percent from \$25.9 million [year?] to approximately \$42.0 million in 2014. This would be a major increase in health care services provided by non-VA clinics and hospitals based on the evaluation criteria. Because the care would be provided at a number of different locations, including cities where large Veteran populations are concentrated (e.g., Rapid City and Scottsbluff) and would be a mutually agreeable service between VA BHHCS and the clinic or hospital, any impact on the capacity of facilities to provide service is expected to be negligible, to minor, depending on the facility. Fort Meade would also remain an option for care to Veterans throughout the service area.

#### **4.11.2.2.2 Fire/Rescue, Emergency Medical, and Law Enforcement Services**

The demand for fire protection, emergency medical services, and police protection is closely linked to the size of the population served. The operation of a new CBOC in Hot Springs and an MSOC and RRTP in Rapid City would result in the reduction of approximately 216 FTEEs whose residence is Fall River. Implementation of the reconfiguration proposal was estimated to occur over five years, so the reduction of FTEEs would be reached by the end of FY 2020. If these 216 FTEEs all relocated from Hot Springs, the projected 2020 population of Fall River County (see Table 3.10-1) would decrease by 2.9 percent, which would be a minor impact. The decrease would be less (1.4 percent) but still minor if the FTEE reduction was partially met by the 116 retirement-eligible FTEEs and if they continued to reside in the county. The addition of 53 FTEEs to Rapid City would have no measurable change to the projected 2020 population of Pennington County. There would be no additional demand that would exceed the capacity of fire or police protection response or emergency medical services because of changes in VA staff levels to operate VA facilities in either Hot Springs or Rapid City.

VA BHHCS would no longer staff and operate the VA Hot Springs FD since there would not be 24-hour inpatient care at the campus or the new CBOC. VA Hot Springs FD has only received two or three requests from the Hot Springs VFD for firefighting assistance under the mutual aid agreement over the past couple of years. Ending the VA Hot Springs FD operations and relocating fire equipment from the VA campus would have a negligible impact on the fire response within the community by the Hot Springs VFD. There are numerous other century-old sandstone buildings in Hot Springs, so including the similar type buildings on the vacated VA campus within the response area of the Hot Springs VFD should not impact the capacity of the VFD to provide fire protection services.

The location and operation of an MSOC and RRTP would be within the response area of the Rapid City FD. The department is staffed 24 hours a day by professional firefighters at seven fire stations. The department has developed a plan and increased annual budgets to add staffing to address the growth and development occurring in the response area (RCFD 2015; Rapid City 2015). The Rapid City FD can provide the response time requirements for VA facilities with 24-hour patient care, eliminating the need for VA BHHCS to staff and operate an FD to support the MSOC and RRTP. The VA facilities would be comparable to facilities and land uses in planned growth areas where the Rapid City FD would provide services; thus, operating an MSOC and RRTP would not exceed the capacity of the Rapid City FD to provide fire suppression and emergency response services to the community.

VA BHHCS would continue to maintain a police and security unit to provide for the safety of patients, staff, and visitors at the CBOC in Hot Springs and the MSOC and RRTP in Rapid City. VA police would continue to patrol the VA Hot Springs Campus until a re-use is implemented that would no longer require VA security. The proposed CBOC would not require 24-hour patrol. Requests could be made of the Hot Springs PD to respond to calls or alarms requiring immediate response and to any potential increase in incidents due to the unoccupied campus, but any increase would not be expected to exceed the response capacity of the Hot Springs PD. VA BHHCS police would monitor any such activity and respond accordingly to protect VA facilities, such as increasing the frequency of patrols by VA police. The presence of VA police would increase in Rapid City to provide protection and security for the MSOC and RRTP, with assistance from the Rapid City PD. Because a location has not been selected, the proximity of the Rapid City PD is not yet determined for responding to calls or alarms from the MSOC or RRTP that could require an immediate response; the need for 24-hour patrols by VA officers would be reviewed but would not likely be necessary. VA BHHCS would update the support agreements with local law enforcement agencies to reflect the change in police presence and security patrols for VA facilities in Hot Springs and Rapid City.

Any decrease in sales tax revenue used to support the Hot Springs VFD and PD because of reduced VA wages would be minor to moderate in sustaining the services when compared to total wages for Fall River County. There would be a negligible change to sales tax revenue used to support the Rapid City FD and PD. Emergency response services are mostly cost recovery services with negligible effects from changes in sales tax revenues.

#### **4.11.2.2.3 Schools**

The reduction of approximately 216 FTEEs whose residence is Fall River County would have a minor impact on the capacity of the Fall River County school districts. There were 1,088 students enrolled in the three districts at the end of the 2014 school year (see Table 3.11-1). Students account for approximately 15 percent of the population, or 150 students per 1,000 residents, based on the 2015 projected population of 7,262 for Fall River County (see Table 3.10-1). Using this simple ratio, if all 216 FTEEs relocated out of Fall River County with school-age children, the enrollment would decrease by approximately 32 students or 2.9 percent. This decrease is considered small when compared to the evaluation criteria. Because more than half of the FTEEs (116 of 216) would be eligible for retirement by FY 2020 (see Section 4.10.2.2.1) and would probably not have school-age children at home, the impact on school enrollment would be much less. Assuming the remaining 100 FTEEs would relocate from Fall River County and all would have school-age children, the decrease in school enrollment would be 15 students or 1.3 percent, which would be a minor impact.

For a more local comparison, if all the employees lived in Hot Springs, based on 2010 and 2014-2015 data:

- the ratio of student population (ages 5-19) and total population in Hot Springs in 2010 is 589 children to 3,711 total population; this comes to just under 16 percent, resulting in a decrease in enrollment by approximately 34 students or a decline of 5.4 percent (USCB 2010). This local impact would be larger than for the county as a whole, but the decline is expected to be less if many of the employees do not have children because they are of retirement age.
- State of Dakota Department of Education has more recent school enrollment data for Hot Springs, showing 802 students (K-12) in Fall 2014. Comparing this to USCB Hot Springs population of 3,532 in 2014 results in student enrollment at 22.7 percent of total population (USCB 2015; SD DOE 2016). Applying this percentage (22.7% x 216) would result in a decline of 49 students or 6.1 percent of the student population (49/802), similar to the 2010 data comparison above.

Students account for approximately 13 percent of the Pennington County population, or 130 students per 1,000 residents. The addition of 53 FTEs residing in Pennington County, with an additional (replacement) 28 retirement-eligible FTEs by 2020, could increase enrollment by approximately 11 students if all FTEs would have school-age children and would relocate into the school district. This increase would have an unmeasurable impact on a school enrollment of over 13,700 (see Table 3.11-4) and on the Rapid City School District.

Any decrease in sales tax revenue used to support the Fall River County school districts because of reduced VA wages would be minor to moderate in sustaining school revenue when compared to total wages for the county. Any increase in sales tax revenue to support the Rapid City School District would be negligible.

#### **4.11.2.2.4 Parks and Recreation**

There are numerous city, state, and federal recreational lands, facilities, and amenities that are easily accessible to VA BHHCS employees in both Hot Springs and Rapid City and the surrounding area. The demand for recreational facilities is also closely linked to the size of the population served, so any reduction in population would increase the amount of city park acreage per resident, having a beneficial effect on the user. Relocating VA BHHCS employees from the VA Hot Springs Campus to a new CBOC would impact those employees who use the campus grounds and open spaces during the workday for passive recreation or exercise.

Patients and visitors to the Hot Springs CBOC and Rapid City MSOC would not be expected to use nearby parks because their visits to the VA facilities would be focused on health care services. Patients and visitors to the Rapid City RRTP would likely use parks and recreational facilities that are nearby and accessible from the RRTP. Because Rapid City maintains more parks and open space per 1,000 residents than the national average (see Section 3.11.2.5), any use by VA patients, visitors, and employees would be negligible.



### **4.11.3 Alternative A-2**

#### **4.11.3.1 Impacts from Construction**

Renovations to Building 12 would have similar effects on community services as described for constructing new facilities for Alternative A-1 because of the comparable number of yearly construction workers needed to complete the renovations. Construction activities on the VA Hot Springs Campus could require temporary closures or blockages of internal roads, but access to buildings for VA fire and police vehicles (and Fire Department services) would be maintained until a new RRTP is operational and there are no overnight Veteran stays at the Hot Springs Campus.

Construction of a proposed MSOC in Rapid City would have similar impacts to community services as described for Alternative A-1.

#### **4.11.3.2 Impacts from Operation**

##### **4.11.3.2.1 Hospitals and Clinics**

Operational impacts on local clinics and hospitals for Alternative A-2 would be the same as described for Alternative A-1.

##### **4.11.3.2.2 Fire/Rescue, Emergency Medical, and Law Enforcement Services**

The demand for fire and police protection and emergency medical services and funding sources for these services for Alternative A-2 would be similar to the impacts described for Alternative A-1. The operation of a renovated CBOC on the VA Hot Springs Campus and an MSOC in Rapid City would result in the same reduction of FTEEs as Alternative A-1. There would be no additional demand that would exceed the capacity of the local fire or police protection response or emergency medical services because of changes in VA staff levels to operate VA facilities in either Hot Springs or Rapid City.

VA BHHCS would no longer staff and operate the VA Hot Springs FD since there would not be 24-hour inpatient care in the CBOC that would remain on campus.

VA BHHCS would continue to maintain a police and security unit to provide for the safety of patients, staff, and visitors to VA facilities in Hot Springs and Rapid City. VA police would continue to patrol the VA Hot Springs Campus until a re-use is implemented that would no longer require VA security. The presence of VA police in Rapid City would be similar to Alternative A-1. VA BHHCS would update the support agreements with local law enforcement agencies to reflect the change in police presence and security patrols for VA facilities in Hot Springs and Rapid City.

The change in sales tax revenue and impact to the Hot Springs VFD and PD or Rapid City FD and PD would be similar to Alternative A but slightly less.

##### **4.11.3.2.3 Schools**

Because the reduction in FTEEs would be the same as Alternative A-1, impacts on school enrollment and school districts would be the same as Alternative A-1.



#### **4.11.3.2.4 Parks and Recreation**

Because the reduction in FTEEs would be the same as Alternative A-1, impacts on parks and recreational facilities would be the same as Alternative A-1, except the VA Hot Springs Campus would remain available for passive recreation and exercise by VA employees during the work day.

### **4.11.4 Alternative B**

#### **4.11.4.1 Impacts from Construction**

Construction of a proposed MSOC in Rapid City could have short-term impacts to public safety and protection services, and would have similar effects on community services as described for Alternative A-1. Temporary impacts to fire and emergency vehicle response times in Hot Springs could be more extensive than described for Alternative A because the construction site would be larger (11 to 13 acres) to co-locate a CBOC and RRTP with a fire station, and the amount of construction vehicle and equipment traffic would be greater. Construction workers would have similar effects on schools and recreation facilities as described for Alternative A-1, but the effects would be greater in Hot Springs because of the larger construction workforce.

#### **4.11.4.2 Impacts from Operation**

##### **4.11.4.2.1 Hospitals and Clinics**

Operational impacts on local clinics and hospitals for Alternative B would be the same as described for Alternative A-1.

##### **4.11.4.2.2 Fire/Rescue, Emergency Medical, and Law Enforcement Services**

The demand for fire and police protection and emergency medical services for Alternative B would not exceed the capacity of local departments, and impacts would be similar to the impacts described for Alternative A-1. A smaller reduction in FTEEs for Alternative B to operate VA facilities in Hot Springs and Rapid City would have similar impacts to population as Alternative A-1; thus, the decrease in demand for and operational impacts on fire, police, and emergency services would be slightly less than Alternative A-1.

VA BHHCS would construct, staff, and operate a new fire station to support a new RRTP in Hot Springs because the Hot Springs VFD would not be able to meet the response times required by VA. The presence of the VA Hot Springs FD would benefit the community by providing firefighting assistance if requested by the Hot Springs VFD in accordance with the mutual aid agreement.

VA BHHCS would continue to maintain a police and security unit to provide for the safety of patients, staff, and visitors at a CBOC and RRTP in Hot Springs. VA police would continue to patrol the VA Hot Springs Campus until a re-use is implemented that would no longer require VA security. VA officers would provide 24-hour patrol of the RRTP in Hot Springs. The presence of VA police in Rapid City would be similar to the current situation in which VA police from the Fort Meade campus monitor alarms and other law enforcement actions at the Rapid City facility, with assistance from the Rapid City PD in accordance with the terms of a written support agreement. VA BHHCS would update the support agreements with local law enforcement agencies to reflect the changes in VA facilities in Hot Springs and Rapid City.

The change in sales tax revenue and impact to the Hot Springs VFD and PD or Rapid City FD and PD would be similar to Alternative A-1 but slightly less.

#### **4.11.4.2.3 Schools**

The reduction 162 FTEEs residing in Fall River County would have similar impacts on school enrollment and the school districts, but slightly less than described for Alternative A-1. If all 162 FTEEs relocated out of Fall River County with school-age children, the enrollment would decrease by approximately 24 students or 2.2 percent. This is considered a small impact, although the decline could be slightly larger in the local community if all the FTEEs lived in Hot Springs, as discussed in Alternative A-1. Because almost three-fourths of the FTEEs (116 of 162) would be eligible for retirement by FY 2020 and would probably not have school-age children at home, the impact on school enrollment would be much less (decrease of 7 students or 0.6 percent) if the remaining 46 FTEEs would relocate from Fall River County with school-age children.

The reduction of 1 FTEE and 28 retirement-eligible FTEEs residing in Pennington County would have an unmeasurable impact on school enrollment in the Rapid City School District.

Change in sales tax revenue used to support the Fall River County school districts because of reduced VA wages would be minor to moderate in sustaining school revenue when compared to total wages for the county. Change in sales tax revenue to support the Rapid City School District would be negligible.

#### **4.11.4.2.4 Parks and Recreation**

Impacts on parks and recreational facilities would be the same as described for Alternative A.

### **4.11.5 Alternative C**

#### **4.11.5.1 Impacts from Construction**

Renovations to Building 12 and the domiciliary would have similar effects on community services as described for constructing new facilities for Alternative B because of the comparable number of yearly construction workers needed to complete the renovations. Construction activities on the VA Hot Springs Campus could require temporary closures or blockages of internal roads, but access to buildings for VA fire and police vehicles would be maintained during construction.

Construction of a proposed MSOC in Rapid City would have similar impacts to community services as described for Alternative A-1.

#### **4.11.5.2 Impacts from Operation**

##### **4.11.5.2.1 Hospitals and Clinics**

Operational impacts on local clinics and hospitals for Alternative C would be the same as described for Alternative A-1.

##### **4.11.5.2.2 Fire/Rescue, Emergency Medical, and Law Enforcement Services**

The demand for fire and police protection and emergency medical services and funding sources for these services for Alternative C would be similar to the impacts described for Alternative B. The

operation of a renovated CBOC and RRTP on the VA Hot Springs Campus and an MSOC in Rapid City would result in the same reduction of FTEEs as Alternative B. There would be no additional demand that would exceed the capacity of the local fire or police protection response or emergency medical services because of changes in VA staff levels to operate VA facilities in either Hot Springs or Rapid City.

VA BHHCS would continue to staff and operate the fire station on the campus to support the RRTP. The continued presence of the VA Hot Springs FD would benefit the community by providing firefighting assistance if requested by the Hot Springs VFD in accordance with the mutual aid agreement.

VA BHHCS would continue to maintain a police and security unit to provide for the safety of patients, staff, and visitors to VA facilities. VA police would continue to patrol the campus, including 24-hour patrol by VA officers for the RRTP. The presence of VA police in Rapid City would be similar to Alternative B. VA BHHCS would update the support agreements with local law enforcement agencies to reflect the change in police presence and security patrols for VA facilities in Hot Springs and Rapid City.

The change in sales tax revenue and impact to the Hot Springs VFD and PD or Rapid City FD and PD would be similar to Alternative A but slightly less.

#### **4.11.5.2.3 Schools**

Because the reduction in FTEEs would be the same as Alternative B, impacts on school enrollment and school districts would be the same as Alternative B.

#### **4.11.5.2.4 Parks and Recreation**

Because the reduction in FTEEs would be the same as Alternative B, impacts on parks and recreational facilities would be the same as Alternative B, except the VA Hot Springs Campus would remain available for passive recreation and exercise by VA employees during the work day.

### **4.11.6 Alternative D**

#### **4.11.6.1 Impacts from Construction**

Construction of a proposed MSOC and 76-bed RRTP in Rapid City would impact fire, police, and emergency vehicle response times similar to the impacts described for Alternative A-1. Temporary impacts to fire, police, and emergency vehicle response times in Hot Springs could be slightly more than described for Alternative A-1 because the construction site would be larger to co-locate a CBOC and 24-bed RRTP with a fire station. Construction workers would have similar effects on schools and recreational facilities as described for Alternative A-1, because the size of the construction workforce would be comparable.

#### **4.11.6.2 Impacts from Operation**

##### **4.11.6.2.1 Hospitals and Clinics**

Operational impacts on local clinics and hospitals for Alternative D would be the same as described for Alternative A-1.

#### **4.11.6.2.2 Fire/Rescue, Emergency Medical, and Law Enforcement Services**

The demand for fire and police protection and emergency medical services for Alternative D would be similar to the impacts described for Alternative A-1. A smaller reduction in FTEEs for Alternative D to operate VA facilities in Hot Springs (-201 FTEEs) and a smaller increase in Rapid City (+46 FTEEs) would have similar impacts to population as Alternative A; thus, the change in demand for and operational impacts on community fire, police, and emergency services would be slightly less than Alternative A-1.

VA BHHCS would construct, staff, and operate a new fire station to support the 24-bed RRTP in Hot Springs because the Hot Springs VFD would not be able to meet the response times required by VA. The presence of the VA Hot Springs FD would benefit the community by providing firefighting assistance if requested by the Hot Springs VFD in accordance with the mutual aid agreement.

VA BHHCS would continue to maintain a police and security unit to provide for the safety of patients, staff, and visitors at a CBOC and 24-bed RRTP in Hot Springs and an MSOC and 76-bed RRTP in Rapid City. VA police would continue to patrol the VA Hot Springs Campus until a re-use is implemented that would no longer require VA security. VA police officers would provide 24-hour patrol of the RRTP in Hot Springs. The presence of VA police in Rapid City would be similar to Alternative A. Because a location has not been selected, the proximity of the Rapid City PD is not yet determined for responding to calls or alarms from the MSOC or RRTP that would require an immediate response; the need for 24-hour patrols by VA officers would be reviewed but would not likely be necessary. VA BHHCS would update the support agreements with local law enforcement agencies to reflect the change in police presence and security patrols for VA facilities in Hot Springs and Rapid City.

The change in sales tax revenue and impact to the Hot Springs VFD and PD or Rapid City FD and PD would be similar to Alternative A-1 but slightly less.

#### **4.11.6.2.3 Schools**

Because the reduction of 201 FTEEs would be very similar to Alternative A-1 and A-2 (216 FTEEs), impacts on Fall River County school enrollment and school districts would be similar to Alternative A-1. Enrollment would decrease by approximately 30 students or 2.8 percent if all FTEEs relocated out of Fall River County with school-age children, which would be a minor impact, and slightly higher if all FTEEs relocated out of Hot Springs. Because more than half of the FTEEs (116 of 201) would be eligible for retirement by FY 2020 and would probably not have school-age children at home, the impact on school enrollment would be much less. Assuming the remaining 85 FTEEs would relocate from Fall River County and all would have school-age children, the decrease in school enrollment would be 13 students or 1.2 percent, which would be a minor impact.

The addition of 46 FTEEs residing in Pennington County, with an additional (replacement) 28 retirement-eligible FTEEs by 2020, could increase enrollment by approximately 10 students if all FTEEs would have school-age children and would all relocate into the school district. This increase would have an unmeasurable impact on school enrollment or on the Rapid City School District.

Change in sales tax revenue used to support the Fall River County school districts because of reduced VA wages would be minor to moderate in sustaining school revenue when compared to total wages for the county. Change in sales tax revenue to support the Rapid City School District would be negligible.

#### **4.11.6.2.4 Parks and Recreation**

Because the reduction in FTEEs would be very similar to Alternative A, impacts on parks and recreational facilities would be similar to Alternative A-1.

### **4.11.7 Alternative E**

#### **4.11.7.1 Impacts from Construction**

Constructing any new structure(s) and renovating existing facilities on the VA Hot Springs Campus would have similar effects on fire and emergency response times, and law enforcement services as described for Alternative C; however, the extent of the effects would be greater because the construction workforce needed for Alternative E would be nearly double that of Alternative C. The temporary influx of construction workers would have similar effects on schools and recreational facilities as described for Alternative A-1. Most construction workers would not be expected to relocate to Hot Springs, however, should some have school-age children and choose to temporarily relocate, then the extent of the effects would be greater because the size of the construction workforce would be larger.

Construction of a proposed MSOC in Rapid City could have short-term impacts to public safety and protection services, and would have similar effects on community services as described for Alternative A-1.

#### **4.11.7.2 Impacts from Operation**

##### **4.11.7.2.1 Hospitals and Clinics**

The provision of appropriate health care services from community providers would continue under this alternative. Due to the Veterans Choice Act, and other recent VA national initiatives, the provision of non-VA care will occur under all the alternatives. The funding that supports the Veterans Choice Act is set to expire in 2017 so it is unknown if this program will continue nationally. However, VA BHHCS will continue to provide a Care in the Community Program into the future under all alternatives.

##### **4.11.7.2.2 Fire/Rescue, Emergency Medical, and Law Enforcement Services**

The demand for fire and police protection and emergency medical services is closely linked to the size of the population served. The expansion of the VA Hot Springs Campus would increase the FTEEs residing in Fall River County by approximately 135 and in Pennington County by approximately 38, including 23 new FTEEs for the new MSOC in Rapid City (see Table 4-10.13). If these 135 FTEEs all relocated to Fall River County from outside the county, the projected 2020 population (see Table 3.10-1) would increase by approximately 1.8 percent, which would be a small impact. There could be additional demand from this population increase that could exceed the capacity of fire or police protection response or emergency medical services from local departments

in Hot Springs. There would be no measurable change to the Pennington County population that would have an additional demand on fire, police, or emergency services.

VA BHHCS would continue to staff and operate the fire station on the campus to support the RRTP and expanded 24-hour inpatient care. The increased number of RRTP beds would not be expected to increase the VA Hot Springs FD staffing or equipment. The continued presence of the VA Hot Springs FD would benefit the community by providing firefighting assistance if requested by the Hot Springs VFD in accordance with the mutual aid agreement. The location and operation of an MSOC would be within the response area of the Rapid City FD, as described for Alternative A-1.

VA BHHCS would continue to maintain a police and security unit to provide for the safety of patients, staff, and visitors to the expanded VA Hot Springs Campus and the MSOC in Rapid City.

VA police would continue 24-hour patrols of the campus. VA security in Rapid City would be similar to the current operations, in which VA police from the Fort Meade campus monitor alarms and other law enforcement actions at the CBOC, with assistance from the Rapid City PD in accordance with the terms of a written support agreement. VA BHHCS would maintain the support agreements with local law enforcement agencies for the VA facilities in Hot Springs and Rapid City.

Increases in sales tax revenue from increases in the VA wages would benefit funding for fire and police services, local schools, and parks and recreational facilities in both communities, and would be a major beneficial impact for Fall River County.

#### **4.11.7.2.3 Schools**

The increase of approximately 135 FTEEs whose residence would be Fall River County would have a minor impact on the capacity of the Fall River County school districts. There were 1,088 students enrolled in the three districts at the end of the 2014 school year (see Table 3.11-1). Students account for approximately 15 percent of the population, or 150 students per 1,000 residents, based on the 2015 projected population of 7,262 for Fall River County (see Table 3.10-1). Using this simple ratio, if all 135 FTEEs relocated to Fall River County with school-age children, the enrollment would increase by approximately 20 students or approximately 1.9 percent. This increase would be a small impact on enrollment. If the 116 retirement-eligible FTEEs from Fall River County would be replaced to implement Alternative E and all had school-age children, enrollment would increase by approximately 48 students or approximately 4.4 percent, which would be a moderate impact on enrollment. However, if all 48 students enrolled in the Hot Springs School District, the student-to-staff ratio would be 14.5, which would slightly exceed the state average of 14.1.

Students account for approximately 13 percent of the Pennington County population, or 130 students per 1,000 residents. The increase of 30 FTEEs residing in Pennington County, along with 28 eligible for retirement by 2020, would increase enrollment by approximately 8 students which would have an unmeasurable impact on school enrollment and the Rapid City School District.

#### **4.11.7.2.4 Parks and Recreation**

Impacts on parks and recreational facilities would be similar to the impacts described for Alternative A, but with an increase in FTEEs and population, usage of local parks and recreational facilities in Hot Springs would be expected to increase.



## **4.11.8 Alternative F**

### **4.11.8.1 Impacts from Construction**

Buildings on the VA Hot Springs Campus would be renovated as agency budgets allow. Renovations would have similar effects on community services in Hot Springs as described for Alternative A-1. Construction activities on the VA Hot Springs Campus could require temporary closures or blockages of internal roads, but access to buildings for VA fire and police vehicles would be maintained during construction. No construction or renovations are proposed for the CBOC in Rapid City under this alternative.

### **4.11.8.2 Impacts from Operation**

Operation of the VA Hot Springs Campus and Rapid City CBOC would continue with the FTEEs assigned to these facilities. There would be no additional demand in services that would exceed the capacity of the local fire, police, or emergency medical services, or increased school enrollment or usage of parks and recreational facilities because of continued operation of VA facilities in either Hot Springs or Rapid City.

VA BHHCS would continue to maintain a police and security unit and FD to provide for the safety of patients, staff, and visitors to the VA Hot Springs Campus, and support the RRTP and 24-hour inpatient care. VA police would continue 24-hour patrols of the campus. VA BHHCS would maintain support agreements with local law enforcement agencies, and provide firefighting assistance if requested by the Hot Springs VFD in accordance with the mutual aid agreement.

With respect to hospitals and clinics, the provision of appropriate health care services from community providers would continue in this alternative.

## **4.11.9 Supplemental Alternative G**

### **4.11.9.1 Impacts from Construction**

Supplemental Alternative G would involve full or partial re-use of the VA Hot Springs Campus and could only happen with implementation of Alternatives A, B, C, or D. If a potential re-use included renovations or modifications to buildings or construction of additional buildings on the campus, construction activities that could increase the demand on fire, police, and emergency vehicle response times, school enrollment, and parks and recreational facilities would likely be similar to the impacts described for Alternatives C and E. However, the extent of the impacts on these community services would depend on the number of construction workers that would be users of these services and the time period over which construction would occur.

### **4.11.9.2 Impacts from Operation**

The type of re-use of the VA Hot Springs Campus would determine the extent of effects to community services. Additional employment and induced population growth relating to this alternative could lead to increased demand on fire and police protection, and increased school enrollment and usage of parks and recreational facilities. The extent of any impacts would depend on the scope and scale of the re-use and the employment workforce it would need; however, the impacts would likely be similar to those described for Alternatives C and E.

## 4.12 Solid Waste and Hazardous Materials

### 4.12.1 Evaluation Criteria

The potential effects related to solid waste generation and disposal were evaluated through a comparison of current and projected solid waste generation rates and the permitted capacity and intake rates for solid waste landfills serving each project area. The evaluation resulted in a determination as to whether existing solid waste disposal facilities could accommodate the projected solid waste generation rates for each alternative.

Hazardous materials that could be transported, used, encountered, or disposed in the construction and operation of each alternative were evaluated to predict the potential effects to human health and the environment. Additionally, the potential for legacy hazardous material contamination at project sites was considered.

An alternative would be considered to result in an adverse impact related to solid waste and hazardous materials if it would:

- result in the exposure of the public or the environment to harmful levels of hazardous materials
- exceed the permitted capacity or intake rates for solid waste landfills serving each project area
- result in noncompliance with applicable federal and state regulations or VA management practices

### 4.12.2 Alternative A-1

#### 4.12.2.1 Impacts from Construction

Wastes generated by construction activities would be transferred to either the Custer Fall River Regional Landfill or the Rapid City Landfill, both of which have adequate capacity to receive additional solid waste.

Locations for the proposed new facilities have not yet been selected. As such, the potential for existing contamination at a project site cannot be determined. However, should environmental contamination be encountered during construction activities, all waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities.

In the event that a new storage tank is installed as part of facility construction, the tank must be registered with SDDENR and spill controls may need to be installed. Similarly, any tanks that are closed and removed as part of demolition activities must be coordinated with SDDENR and in accordance with applicable regulations.

Construction-related adverse impacts from solid and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible effect on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

#### **4.12.2.2      *Impacts from Operation***

Solid waste, medical waste, and hazardous waste generation from the proposed Hot Springs CBOC would decrease from the current waste generation rates of the campus. Attempts to meet VA waste diversion goals could reduce quantities destined for disposal. Adverse impacts to waste disposal facilities are not expected.

Solid waste, medical waste, and hazardous waste generation from operating an MSOC and RRTP in Rapid City would increase from current waste generation rates. The Rapid City Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept increases in medical waste generation. Hazardous waste generation could also increase. VA would determine whether hazardous waste generation from operating a Rapid City MSOC and RRTP could continue to be managed under the Fort Meade campus permit or would require a new permit.

Operation of the new facilities is not expected to result in adverse impacts related to solid waste and hazardous materials. In Rapid City, increases in generation of solid, medical, and hazardous waste are predicted, but would have a negligible impact on treatment and disposal facilities. Waste minimization opportunities are described in Chapter 5.

#### **4.12.3      *Alternative A-2***

##### **4.12.3.1      *Impacts from Construction***

Wastes generated by renovation of the Hot Springs Campus and construction of the MSOC and RRTP in Rapid City would be transferred to either the Custer Fall River Regional Landfill or the Rapid City Landfill, both of which have adequate capacity to receive additional solid waste.

Renovation activities could generate special wastes, including asbestos-containing materials and lead-based paint waste. All waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities. Attempts to meet VA solid waste diversion goals would reduce quantities destined for disposal.

A location for the new facilities in Rapid City has not yet been selected. As such, the potential for existing contamination at a project site cannot be determined. However, should environmental contamination be encountered during construction activities, all waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities.

In the event that a new storage tank is installed as part of MSOC and RRTP construction, the tank must be registered with SDDENR and spill controls may need to be installed. Similarly, any tanks that are closed and removed as part of renovation activities must be coordinated with SDDENR and in accordance with applicable regulations.

Construction- or renovation-related adverse impacts from solid wastes and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible impact on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

### **4.12.3.2      *Impacts from Operation***

Solid waste, medical waste, and hazardous waste generation from CBOC operations in Building 12 on the existing Hot Springs Campus would be less than current waste generation rates. The Custer Fall River Regional Landfill has sufficient capacity to continue accepting this level of solid waste without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept a similar level of medical waste generation. Hazardous waste generation would also be similar or less. VA would determine whether hazardous waste generation could continue to be managed under the current permit or a new permit would be required. Attempts to meet VA waste diversion goals could reduce quantities destined for disposal. Adverse impacts to waste disposal facilities are not expected.

Solid waste, medical waste, and hazardous waste generation from operating an MSOC and RRTP in Rapid City would increase from current waste generation rates. The Rapid City Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept increases in medical waste generation. Hazardous waste generation could also increase. VA would determine whether hazardous waste generation from a Rapid City MSOC and RRTP could continue to be managed under the Fort Meade campus permit or would require a new permit.

Operation of the new/renovated facilities is not expected to result in adverse impacts to solid and hazardous materials. In Rapid City, increases in generation of solid, medical, and hazardous waste are predicted, but would have a negligible impact on treatment and disposal facilities. Waste minimization opportunities are described in Chapter 5.

## **4.12.4      *Alternative B***

### **4.12.4.1      *Impacts from Construction***

Wastes generated by construction activities would be transferred to either the Custer Fall River Regional Landfill or the Rapid City Landfill, both of which have adequate capacity to receive additional solid waste.

Locations for the new facilities have not yet been selected. As such, the potential for existing contamination at a project site cannot be determined. However, should environmental contamination be encountered during construction activities, all waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities.

In the event that a new storage tank is installed as part of facility construction, the tank must be registered with SDDENR and spill controls may need to be installed. Similarly, any tanks that are closed and removed as part of demolition activities must be coordinated with SDDENR and in accordance with applicable regulations.

Construction-related adverse impacts from solid waste and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible impact on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

#### **4.12.4.2      *Impacts from Operation***

Solid waste, medical waste, and hazardous waste generation from a Hot Springs CBOC and RRTP would be similar to or less than current waste generation rates of the VA Hot Springs Campus. The Custer Fall River Regional Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept a similar level of medical waste generation. Hazardous waste generation could also increase. VA would determine whether hazardous waste generation could continue to be managed under the current permit or a new permit would be required. Attempts to meet VA waste diversion goals could reduce quantities destined for disposal. Adverse impacts to waste disposal facilities are not expected.

Solid waste, medical waste, and hazardous waste generation from operating an MSOC in Rapid City would increase from current waste generation rates. The Rapid City Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept increases in medical waste generation. Hazardous waste generation could also increase. VA would determine whether hazardous waste generation from operating a Rapid City MSOC could continue to be managed under the Fort Meade campus permit or would require a new permit.

Operation of the new facilities is not expected to result in adverse impacts to solid and hazardous materials. In Rapid City, increases in generation of solid, medical, and hazardous waste are predicted, but would have a negligible impact on treatment and disposal facilities. Waste minimization opportunities are described in Chapter 5.

### **4.12.5      *Alternative C***

#### **4.12.5.1      *Impacts from Construction***

Wastes generated by renovation of the Hot Springs Campus and construction of the MSOC in Rapid City would be transferred to either the Custer Fall River Regional Landfill or the Rapid City Landfill, both of which have adequate capacity to receive additional solid waste.

Renovation activities could generate special wastes, including asbestos-containing materials and lead-based paint waste. All waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities. Attempts to meet VA solid waste diversion goals would reduce quantities destined for disposal.

A location for a new MSOC in Rapid City has not yet been selected. As such, the potential for existing contamination at a project site cannot be determined. However, should environmental contamination be encountered during construction activities, all waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities.

In the event that a new storage tank is installed as part of MSOC construction, the tank must be registered with SDDENR and spill controls may need to be installed. Similarly, any tanks that are closed and removed as part of renovation activities must be coordinated with SDDENR and in accordance with applicable regulations.

Construction- or renovation-related adverse impacts from solid wastes and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible impact on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

#### **4.12.5.2      *Impacts from Operation***

Solid waste, medical waste, and hazardous waste generation from operations in Hot Springs would be similar to or less than current waste generation rates. The Custer Fall River Regional Landfill has sufficient capacity to continue accepting this level of solid waste without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept a similar level of medical waste generation. Hazardous waste generation would also be similar or less. VA would determine whether hazardous waste generation could continue to be managed under the current permit or a new permit would be required. Attempts to meet VA waste diversion goals could reduce quantities destined for disposal. Adverse impacts to waste disposal facilities are not expected.

Solid waste, medical waste, and hazardous waste generation from operating an MSOC in Rapid City would increase from current waste generation rates. The Rapid City Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept increases in medical waste generation. Hazardous waste generation could also increase. VA would determine whether hazardous waste generation from a Rapid City MSOC could continue to be managed under the Fort Meade campus permit or would require a new permit.

Operation of the new/renovated facilities is not expected to result in adverse impacts to solid and hazardous materials. In Rapid City, increases in generation of solid, medical, and hazardous waste are predicted, but would have a negligible impact on treatment and disposal facilities. Waste minimization opportunities are described in Chapter 5.

### **4.12.6      *Alternative D***

#### **4.12.6.1      *Impacts from Construction***

Wastes generated by construction activities would be transferred to either the Custer Fall River Regional Landfill or the Rapid City Landfill, both of which have adequate capacity to receive additional solid waste.

Locations for the new facilities have not yet been selected. As such, the potential for existing contamination at a project site cannot be determined. However, should environmental contamination be encountered during construction activities, all waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities.

In the event that a new storage tank is installed as part of facility construction, the tank must be registered with SDDENR and spill controls may need to be installed. Similarly, any tanks that are closed and removed as part of demolition activities must be coordinated with SDDENR and in accordance with applicable regulations.



Construction-related adverse impacts from solid wastes and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible impact on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

#### **4.12.6.2      *Impacts from Operation***

Solid waste, medical waste, and hazardous waste generation from operating a CBOC and 24-bed RRTP in Hot Springs would decrease from current waste generation rates. The Custer Fall River Regional Landfill has sufficient capacity to accept a decreased level of solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept a decreased level of medical waste generation. Hazardous waste generation could also decrease. VA would determine whether hazardous waste generation could continue to be managed under the current permit or a new permit would be required. Attempts to meet VA waste diversion goals could reduce quantities destined for disposal. Adverse impacts to waste disposal facilities are not expected.

Solid waste, medical waste, and hazardous waste generation from operating an MSOC and 76-bed RRTP in Rapid City would increase from current waste generation rates. The Rapid City Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept increases in medical waste generation. Hazardous waste generation could also increase. VA would determine whether hazardous waste generation from Rapid City operations could continue to be managed under the Fort Meade campus permit or would require a new permit.

Operation of the new facilities is not expected to result in adverse impacts to solid wastes and hazardous materials. In Rapid City, creases in generation of solid, medical, and hazardous waste are predicted, but would have a negligible impact on treatment and disposal facilities. Waste minimization opportunities are described in Chapter 5.

### **4.12.7      *Alternative E***

#### **4.12.7.1      *Impacts from Construction***

Wastes generated by renovation and small-scale construction activities at the Hot Springs Campus would be transferred to the Custer Fall River Regional Landfill, which has adequate capacity to receive additional solid waste. Wastes generated by construction of the MSOC in Rapid City would be transferred to the Rapid City Landfill, which has adequate capacity to receive additional solid waste..

Renovation activities could generate special wastes, including asbestos-containing materials and lead-based paint waste. All waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities. Attempts to meet VA solid waste diversion goals would reduce quantities destined for disposal.

A location for a new MSOC in Rapid City has not yet been selected. As such, the potential for existing contamination at a project site cannot be determined. However, should environmental contamination be encountered during construction activities, all waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities.

In the event that a new storage tank is installed as part of MSOC construction, the tank must be registered with SDDENR and spill controls may need to be installed. Similarly, any tanks that are closed and removed as part of renovation activities must be coordinated with SDDENR and in accordance with applicable regulations.

Renovation- and construction-related adverse impacts from solid and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible impact on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

#### **4.12.7.2      *Impacts from Operation***

Solid waste, medical waste, and hazardous waste generation from expanded operations on the Hot Springs Campus would be similar to or less than current waste generation rates. The Custer Fall River Regional Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept increases in medical waste generation. VA would determine whether hazardous waste generation could continue to be managed under the current permit or a new permit would be required. Attempts to meet VA waste diversion goals could reduce quantities destined for disposal. Adverse impacts to waste disposal facilities are not expected.

Solid waste, medical waste, and hazardous waste generation from operating an MSOC in Rapid City would increase from current waste generation rates. The Rapid City Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept increases in medical waste generation. Hazardous waste generation could also increase. VA would determine whether hazardous waste generation from a Rapid City MSOC could continue to be managed under the Fort Meade campus permit or would require a new permit.

Operation of the new/renovated facilities is not expected to result in adverse impacts to solid and hazardous materials. In Hot Springs and Rapid City, increases in generation of solid, medical, and hazardous waste are predicted, but would have a negligible impact on treatment and disposal facilities. Waste minimization opportunities are described in Chapter 5.

### **4.12.8      *Alternative F***

#### **4.12.8.1      *Impacts from Construction***

Under Alternative F, only renovation of existing facilities at the Hot Springs Campus as authorized by annual budgets would occur. Wastes generated by renovation activities would be transferred to the Custer Fall River Regional Landfill, which has adequate capacity to receive additional solid waste. No construction activities would occur in Rapid City.

Renovation activities could generate special wastes, including asbestos-containing materials and lead-based paint waste. All waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities. Attempts to meet VA solid waste diversion goals would reduce quantities destined for disposal.

Renovation-related adverse impacts from solid and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible impact on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

#### **4.12.8.2      *Impacts from Operation***

Solid waste, medical waste, and hazardous waste generation from operations in Hot Springs and Rapid City would remain relatively similar to current waste generation rates. Continued operation of the facilities is not expected to result in adverse impacts to solid and hazardous materials. Waste minimization opportunities are described in Chapter 5.

### **4.12.9      Supplemental Alternative G**

#### **4.12.9.1      *Impacts from Construction***

Under Supplemental Alternative G, some or all of the existing facilities in Hot Springs would be re-used by other tenants. Depending on the intended use, some facility renovation or small-scale construction may be required. Wastes generated by renovation and construction activities would be transferred to the Custer Fall River Regional Landfill, which has adequate capacity to receive additional solid waste.

Renovation activities could generate special wastes, including asbestos-containing materials and lead-based paint waste. All waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities. Attempts to meet VA solid waste diversion goals would reduce quantities destined for disposal.

Construction- and renovation-related adverse impacts from solid and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible impact on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

#### **4.12.9.2      *Impacts from Operation***

Operation of some or all of the Hot Springs Campus facilities by new tenant(s) is not expected to result in adverse impacts to solid and hazardous materials. Solid waste, medical waste, and hazardous waste generation could increase or decrease, depending on nature of the tenant operations. The Custer Fall River Regional Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept increases in medical waste generation. Hazardous waste generation could also increase. The tenant would determine whether a hazardous waste permit would be required.

## 4.13 Transportation and Traffic

### 4.13.1 Evaluation Criteria

The evaluation of transportation and traffic focuses on the operational capacity and physical condition of the urban and rural roadway networks and the availability of modes of travel. The VA Site Development Design Manual (VA 2013) includes traffic circulation and roadway network as criteria for site selection, along with accessibility to public transportation. An impact would be considered adverse if a reconfiguration alternative would result in any of the following conditions:

- The current roadway network is insufficient to accommodate changes in traffic circulation around existing or proposed VA BHHCS facilities in Hot Springs or Rapid City without major capacity, safety, or access improvements.
- A substantial increase in demand for public transit services that could not be accommodated by transit providers without disrupting available capacity or existing levels of service.
- Potentially hazardous conditions for pedestrians or bicyclists, or interference with pedestrian or bicycle access to existing or proposed VA BHHCS facilities or adjacent areas.

Reduction in vehicle trips or travel associated with any reconfiguration alternative would be a beneficial impact on traffic circulation on the local and urban roadway networks.

### 4.13.2 Alternative A-1

#### 4.13.2.1 *Impacts from Construction*

Construction of the proposed CBOC in the Hot Springs area and the proposed MSOC and RRTP in the Rapid City area would temporarily disrupt the roadway network and traffic circulation. The extent of the disruption would depend on the location of the selected sites and the existing roadway function (arterial, collector, or local road), and traffic conditions. Construction activities could temporarily require the closure or restriction of travel lanes (including sidewalks and bikeways) or designation of a detour, which could result in traffic congestion near the construction sites and impede safe travel by pedestrians and bicyclists. Trucks hauling construction equipment, materials, and debris to and from the sites would be expected to use local truck traffic routes; however, haul truck activity would still likely result in temporary adverse impacts on traffic in the vicinity of the construction sites. Traffic control plans would be coordinated with the local public works/engineering departments to address temporary road closures, detours, and haul truck routes to minimize disruption to traffic flow and to maintain access to any businesses and residential areas that could be near the selected locations.

Increases in the number of construction worker vehicles and haul trucks traveling on the primary arterials outside the city limits of Hot Springs and Rapid City would be temporary and not likely to have any adverse effects to these roadways.

## 4.13.2.2 Impacts from Operation

### 4.13.2.2.1 Hot Springs

The roadway network through and around Hot Springs would be expected to accommodate traffic to and from a new five-acre CBOC site located in the Hot Springs area. Depending on the selected site, local roadway improvements could include resurfacing, drainage (curb and gutter), accessible sidewalks, and crosswalks.

Vehicle trips to, from, and within Hot Springs by employees, patients, visitors, and support/delivery services would decrease with the relocation of the RRTP to Rapid City, maintenance status of the VA Hot Springs Campus pending re-use, and availability of expanded health care services at an MSOC in Rapid City. The reduction in vehicle trips would result in a net neutral or a beneficial impact on local traffic and roads. On a city-wide basis, the route of these vehicle trips would change based on the location of the new Hot Springs CBOC in relation to the VA campus, but could still affect traffic circulation and congestion during the peak tourist season along the main thoroughfares and intersections.

Rural public transit could experience an increase in demand for transportation service should Veterans choose not to use their community's health care services and instead choose to travel to a VA facility. Since rural public transit is provided on 24-hour advanced request, any increase in demand is not likely to disrupt capacity or level of service.

### 4.13.2.2.2 Rapid City

The roadway network through and around Rapid City would be expected to accommodate traffic to and from a 17-acre site for a co-located RRTP and MSOC. Depending on the selected site, local roadway improvements could include resurfacing, drainage (curb and gutter), turn lanes, traffic signals, bus turn-outs, bicycle lanes, accessible sidewalks, and crosswalks. These improvements are typical of new developments within larger communities and would be addressed by the local zoning and code requirements for public roadways and traffic control to minimize adverse effects.

Operating an MSOC and RRTP in the Rapid City area would increase vehicle trips to and from the selected site. Any adverse effect to local traffic conditions would depend on the location of the site and roadway improvements associated with the development. Traffic congestion is based on the number of vehicle trips during peak travel hours. The number of peak-hour vehicle trips made by employees, patients, visitors, and delivery services can be estimated based on the type of land use or facility. The estimated vehicle trips associated with an MSOC and RRTP are shown in Table 4.13-1.

**Table 4.13-1. Estimated Vehicle Trips for MSOC and RRTP.**

Facility Type	Trip Rate Unit <sup>1</sup>	Trip Rate <sup>1</sup>			Units <sup>2</sup>	Vehicle Trips		
		PM Hour	Peak	Daily		PM Hour	Peak	Daily
<b>MSOC<sup>3</sup></b>	<b>1,000 square feet</b>	<b>3.57</b>		<b>36.13</b>	<b>66,281 square feet</b>	<b>237</b>		<b>2,395</b>
<b>RRTP<sup>4</sup></b>	<b>Room</b>	<b>0.47</b>		<b>5.63</b>	<b>100 beds</b>	<b>47</b>		<b>563</b>
<b>Total (co-located MSOC and RRTP)</b>						<b>284</b>		<b>2,958</b>

<sup>1</sup> Source: ITE 2012.

<sup>2</sup> Refer to Section 2.3.1.1.1, New Facilities

<sup>3</sup> Comparable to medical office land use code (ITE 2012).

<sup>4</sup> Comparable to motel land use code (ITE 2012).

An estimated 284 vehicles could be entering and exiting the site of a co-located MSOC and RRTP during a peak hour between 4:00 p.m. and 6:00 p.m. on a weekday. This number of vehicles could contribute to current or future congestion (based on 2035 projected traffic) anticipated along principal and minor arterial roadways throughout Rapid City during evening peak travel time (shown in Figures 3.13-2, 3.13-3, and 3.13-5 in Section 3.13). The extent of any adverse effect to traffic circulation would depend on the selected site and travel routes to and from the site, and locations of other future development that would contribute to 2035 traffic. The estimated 2,958 daily vehicle trips on weekdays would contribute to the average daily traffic on the roadways used as travel routes to access the site of a co-located MSOC and RRTP. The current (2014) average daily traffic on principal and minor arterial roadways ranges between 8,000 and 30,000 vehicles (see Section 3.13.2.2) and, depending on the location and travel routes, the daily vehicle trips to and from a co-located MSOC and RRTP could have an adverse effect on traffic circulation on lesser-traveled roadways. However, if travel routes are the same as those used to access the existing CBOC, the number of daily vehicle trips would be less due to accounting for the CBOC vehicles trips already on those routes. Any effect on roadway condition or capacity that could require improvements would depend on whether current or projected traffic exceeds the design function of the roadway for safe and convenient travel. VA BHHCS would coordinate with the Rapid City Public Works Department to complete a traffic study, if required, for the selected site for the MSOC and RRTP and incorporate appropriate roadway improvements into the site design. Roadway improvements to minimize adverse traffic impacts could include traffic signals, turn lanes, and bus turn-outs.

The demand for public transportation (fixed bus route and door-to-door transit) could increase because of the addition of the MSOC and RRTP to the Rapid City area. A criterion for site selection is accessibility to public transportation; therefore, a fixed bus route adjacent to or near the selected site(s) could experience an increase in riders. The extent of any adverse effect from increased ridership would depend on the existing operating capacity on routes serving the area. VA BHHCS would coordinate with the Rapid Transit System to encourage adding or extending bus service and capacity to accommodate any increased ridership, including adding a bus stop and shelter at the site of the MSOC and RRTP. Since door-to-door transit is provided on 24-hour advanced request, any increase in demand is not likely to disrupt capacity or level of service.

### **4.13.3      Alternative A-2**

#### **4.13.3.1      *Impacts from Construction***

Construction activities in Hot Springs would only occur on the VA campus and would be primarily internal building renovations. Temporary construction impacts to local roadways and traffic circulation would be limited to disruptions caused by haul truck activity, and would be similar to but less extensive than the impacts described for Alternative A-1.

Potential impacts to Rapid City roadways and traffic during construction of an MSOC and RRTP would be similar to the impacts described for Alternative A-1.

#### **4.13.3.2      *Impacts from Operation***

##### **4.13.3.2.1      Hot Springs**

Impacts to local roadways and traffic would be similar to impacts described for Alternative A-1. This is because the number of vehicle trips would still likely decrease due to the reduction in FTEEs and



availability of expanded health care services at a new MSOC in Rapid City. Impacts to rural public transit would be similar to the impacts described for Alternative A-1.

#### **4.13.3.2.2 Rapid City**

Impacts to the local roadways and traffic circulation in Rapid City would be identical to the impacts described for Alternative A-1. Impacts to public transportation would be identical to the impacts described for Alternative A-1.

### **4.13.4 Alternative B**

#### **4.13.4.1 Impacts from Construction**

Construction activities would be expected to have similar effects on local roadways and traffic circulation as described for Alternative A-1. Temporary impacts to traffic in the Hot Springs area could be more extensive than described for Alternative A because the construction site would be larger (11 to 13 acres) to co-locate a CBOC and RRTP with a fire station. Because only an MSOC (10-acre site) is proposed for Rapid City, construction-related impacts on traffic could be less extensive than Alternative A-1. The extent of impacts would be dependent on the location of the selected sites in Hot Springs and Rapid City and the design function and traffic conditions of the roadway network adjacent to and surrounding the sites.

#### **4.13.4.2 Impacts from Operation**

##### **4.13.4.2.1 Hot Springs**

Impacts to local roadways and traffic circulation would be similar to impacts described for Alternative A-1. This is because the number of vehicle trips would still likely decrease due to the reduction in FTEEs and availability of expanded health care services at a new MSOC in Rapid City. Impacts to rural public transit would be similar to the impacts described for Alternative A-1.

##### **4.13.4.2.2 Rapid City**

Impacts to the local roadways and traffic circulation in Rapid City would be similar to and possibly less extensive than the impacts described for Alternative A-1. Operation of an MSOC in Rapid City would increase daily vehicle trips (see Table 4.13-1) to and from the selected site over the number of vehicle trips to the existing CBOC, and would have similar but less extensive impacts to traffic circulation and congestion as the impacts described for Alternative A-1. Impacts to public transportation would be similar to but less extensive than the impacts described for Alternative A-1.

### **4.13.5 Alternative C**

#### **4.13.5.1 Impacts from Construction**

Construction activities in Hot Springs would only occur on the VA campus and would be primarily internal building renovations. Temporary construction impacts to local roadways and traffic circulation would be limited to disruptions caused by haul truck activity, and would be similar to but less extensive than the impacts described for Alternative A-1.

Potential impacts to Rapid City roadways and traffic during construction of an MSOC would be similar to the impacts described for Alternative A-1. Because only a 10-acre site is proposed instead

of a larger site to co-locate an RRTP, the extent of any construction-related disruptions to roadways and traffic would be less extensive than Alternative A-1, but would depend on the design function and traffic conditions of the roadway network adjacent to and surrounding the site.

#### **4.13.5.2      *Impacts from Operation***

##### **4.13.5.2.1      Hot Springs**

Impacts to local roadways and traffic would be similar to impacts described for Alternative A-1. This is because the number of vehicle trips would still likely decrease due to the reduction in FTEEs and availability of expanded health care services at a new MSOC in Rapid City. Impacts to rural public transit would be similar to the impacts described for Alternative A-1.

##### **4.13.5.2.2      Rapid City**

Impacts to the local roadways and traffic circulation in Rapid City would be similar to the impacts described for Alternative B. Impacts to public transportation would be similar to but less extensive than the impacts described for Alternative A-1.

#### **4.13.6      Alternative D**

##### **4.13.6.1      *Impacts from Construction***

Construction activities would be expected to have similar effects on local roadways and traffic circulation as described for Alternative A-1. Temporary impacts to traffic in the Hot Springs area could be more extensive than described for Alternative A-1 because the construction site would be larger (11 to 13 acres) to co-locate a CBOC and 24-bed RRTP with a fire station. Although the RRTP proposed for Rapid City would have fewer beds than Alternative A-1, the size of the site (14 to 17 acres) to co-locate the RRTP and MSOC would be similar; thus, construction-related impacts on traffic would be similar to those described for Alternative A-1. The extent of impacts would be dependent on the location of the selected sites in Hot Springs and Rapid City and the design function and traffic conditions of the roadway network adjacent to and surrounding the sites.

##### **4.13.6.2      *Impacts from Operation***

##### **4.13.6.2.1      Hot Springs**

Impacts to local roadways and traffic circulation would be similar to impacts described for Alternative A-1. This is because the number of vehicle trips would still likely decrease due to the reduction in FTEEs and availability of expanded health care services at a new MSOC in Rapid City. Impacts to rural public transit would be similar to the impacts described for Alternative A-1.

##### **4.13.6.2.2      Rapid City**

Impacts to the local roadways and traffic circulation in Rapid City would be similar to and possibly less extensive than the impacts described for Alternative A-1. Operation of an MSOC and a 76-bed RRTP would increase daily vehicle trips (but less than shown in Table 4.13-1) to and from the selected site over the number of vehicle trips to the existing CBOC, and would have similar but less extensive impacts to traffic circulation and congestion as the impacts described for Alternative A-1 because the RRTP would have fewer beds than Alternative A-1. Impacts to public transportation would be similar to but less extensive than the impacts described for Alternative A-1.

## **4.13.7 Alternative E**

### **4.13.7.1 Impacts from Construction**

Construction activities in Hot Springs would likely only occur on the VA campus and would include exterior and interior renovations to numerous buildings, the addition of another floor to Building 12, and construction of potential new structure(2) to accommodate additional services (e.g., storage, housing). Temporary construction impacts to local roadways and traffic circulation would be limited to disruptions caused by haul truck activity, and would be similar to and more extensive than the impacts described for Alternative B.

Because only an MSOC (10-acre site) is proposed for Rapid City, construction-related impacts on traffic could be less extensive than Alternative A-1. The extent of impacts would be dependent on the location of the selected site in Rapid City and the design function and traffic conditions of the roadway network adjacent to and surrounding the sites.

### **4.13.7.2 Impacts from Operation**

#### **4.13.7.2.1 Hot Springs**

Operations of the VA Hot Springs Campus would expand with a potential increase in RRTP capacity; increasing the number of in-patient, community living center, and intensive care beds; and initiating compensated work therapy programs. The number of VA FTEEs would increase by almost 40 percent, along with workers from other support systems.

The proposed expansion would greatly increase vehicle trips by employees, patients, visitors, and support/delivery services and workers, which could have an adverse effect on the traffic circulation on the local roadways through Hot Springs and on the campus. Traffic congestion and vehicle queues could increase along the main thoroughfares and at certain intersections during peak morning and evening travel hours, and during the peak tourist season. The capacity of the roadway network in Hot Springs would likely accommodate an increase in vehicle trips; however, certain roadway improvements such as adding turn lanes and intersection signals (traffic light, four-way stop) would minimize adverse traffic impacts. Implementation of any roadway improvements outside the VA campus would be at the discretion of the City of Hot Springs.

The additional vehicle trips could adversely affect the capacity of the roadway network and parking on the campus such that roadway improvements could be necessary to minimize traffic congestion, especially during peak travel hours. Possible improvements could include one-way travel direction, lane striping, and additional parking.

Demand for rural public transit service is not likely to change.

#### **4.13.7.2.2 Rapid City**

Impacts to the local roadways and traffic circulation in Rapid City would be similar to the impacts described for Alternative B. Impacts to public transportation would be similar to but less extensive than the impacts described for Alternative A-1.

## **4.13.8 Alternative F**

### **4.13.8.1 Impacts from Construction**

Buildings on the VA Hot Springs Campus would be renovated and modified to maintain clinical standards as funds are available through the routine budget process. Construction-related transportation impacts would be similar to the impacts described for Alternative C but would be less extensive. There would be no upgrades or renovations to the existing CBOC in Rapid City so there would be no temporary impacts on local roads or traffic from construction in Rapid City.

### **4.13.8.2 Impacts from Operation**

There would be no change to the operation of the Hot Springs Campus that would affect local roads or traffic. Vehicle trips to and from the campus would be expected to remain fairly consistent. Demand for rural public transit service is not likely to change. There would be no change to the operation of the Rapid City CBOC that would have any effect on local roadways, traffic, or public transportation.

## **4.13.9 Supplemental Alternative G**

### **4.13.9.1 Impacts from Construction**

Supplemental Alternative G involves full or partial re-use of the VA Hot Springs Campus and could only happen with implementation of Alternatives A, B, C, or D. If a potential re-use included renovations or modifications to buildings or construction of additional buildings on the campus, construction-related impacts to the roadway network and local traffic would be similar to the impacts described for Alternatives C and E. There would be no construction-related transportation impacts if a potential re-use did not require any construction, renovation, or modification to campus buildings.

### **4.13.9.2 Impacts from Operation**

The type of re-use of the VA Hot Springs Campus would determine the extent of effects to the roadway network and traffic in Hot Springs and on the campus. The extent of any adverse impacts would depend on the specific re-use and the level of traffic it would generate, which could vary widely, for example, from low-traffic uses of a continuing care facility or low-density residential occupation of existing buildings, in contrast to retail or general office uses. Impacts to the roadway network and traffic circulation could be similar to impacts described for Alternative E. However, some re-use proposals, such as the Medical Miracle (see Section 2.3.8), would incorporate off-campus components of their activities, which would further increase vehicle trips through Hot Springs and potentially have a greater adverse effect by increasing traffic congestion and vehicle queues during peak travel times. Roadway improvements could be necessary to minimize traffic congestion, especially during peak travel hours. Possible improvements could include adding turn lanes and intersection signals (traffic light, four-way stop) on the main thoroughfares in Hot Springs and one-way travel direction, lane striping, and additional parking on the VA campus.

## 4.14 Utilities

### 4.14.1 Evaluation Criteria

An alternative would be considered to result in an adverse impact related to utilities if it would:

- require or result in the construction of new water supply or new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause adverse environmental effects
- require or result in the construction of new electricity or natural gas generation or transmission facilities, the construction of which could cause adverse environmental effects
- require or result in the construction of communications lines or expansion of existing facilities, the construction of which could cause adverse environmental effects

The assumptions used in estimating utility consumption and potential for impacts are listed in the following paragraphs.

#### 4.14.1.1 *Water Supply and Wastewater Treatment*

Indoor water use projections can vary widely for a given facility and function, and would depend on the number of staff employed and patients served. However, water use projections for some facilities based on facility size are available.

- CBOC – It is assumed that a CBOC would resemble the water use of a facility characterized as a medical office. Reported medical office water use rates range from 0.0375 gallons per day per square foot (gpd/ft<sup>2</sup>) to 0.6185 gpd/ft<sup>2</sup>. A water use rate of 0.1308 gpd/ft<sup>2</sup> was used in the impact evaluation (Morales et al. 2009).
- MSOC – It is assumed that an MSOC would, as an upper bound, resemble the water use of a facility characterized as a hospital. A water use rate of 0.2040 gpd/ft<sup>2</sup> was used in the impact evaluation (Stanford 2010).
- RRTP – It is assumed that a RRTP would resemble the water use of a facility characterized as a hotel. A water use rate of 0.2696 gpd/ft<sup>2</sup> was used in the impact evaluation (Morales et al. 2009).

Outdoor water uses (including landscape irrigation) are also included in water use projections. It is assumed that approximately 10 percent of a site would be irrigated, and the associated outdoor water use requirement is approximately 610,000 gallons per year per acre (Brelje & Race 2009). This estimate is consistent with past Hot Springs Campus irrigation water usage (average 620,000 gallons per year per acre from FY 2010 to FY 2014) (L. Epperson, email to C. Modovsky and M. Peters, July 6, 2015).

Wastewater generation rates are typically associated with water consumption rates. An indoor water use to wastewater generation ratio of 1:1 was assumed for the impact evaluation.

#### **4.14.1.2 Electricity**

The potential effects related to electricity consumption were evaluated through a comparison of current and projected electricity consumption rates and the ability of electric utilities to supply the projected consumption requirements. Electricity consumption rates were projected using the current electricity consumption rates, standard electricity consumption rates based on geographic location and facility size, and the estimated facility size for each alternative. The standard annual electricity consumption rate of 13.2 kilowatt-hours per square foot for all buildings in the Midwest census region (EIA 2003a) was used for the impact evaluation.

#### **4.14.1.3 Heating**

For new facilities located in Rapid City, where natural gas is available, the standard annual natural gas consumption rate of 51.5 cubic feet per gross square foot (ft<sup>3</sup>/GSF) for all buildings in the Midwest census region (EIA 2003b) was used for the impact evaluation.

For new facilities located in Hot Springs, propane-fueled heating was assumed. The heating requirement was determined using the standard natural gas consumption rate, and a corresponding propane consumption rate was calculated.

For use of existing (and renovated) facilities at the campus in Hot Springs, continued consumption of fuel oil was assumed. The fuel oil consumption rate for the existing VA Hot Springs facilities indicates that the campus has a higher rate of energy use for facility heating, measured in British thermal units (Btu) per GSF, than the standard consumption rate (EIA 2003b). This may be due to inefficiencies with the boiler system and because generated steam is used for purposes other than heating (such as equipment sterilization, hot water production, and humidification). Renovations to the boiler system could result in improved efficiencies.

#### **4.14.1.4 Communications**

The potential effects related to communications services were evaluated through a qualitative assessment of the ability of communications utilities to provide services to new facilities.

### **4.14.2 Alternative A-1**

The following assumptions pertain to facilities under Alternative A:

- CBOC, Hot Springs – approximately 16,711 GSF, minimal landscape irrigation requirements
- MSOC, Rapid City – approximately 66,281 GSF, minimal landscape irrigation requirements
- RRTP (100-bed facility), Rapid City – approximately 78,675 GSF, moderate landscape irrigation requirements

#### **4.14.2.1 Impacts from Construction**

Projected utility requirements for all alternatives are summarized in Figure 4.14-1.



Figure 4.14-1. Projected Utility Requirements

<b>BHHCS EIS Utilities</b>									
<b>Constants:</b>									
<b>Facility Size Estimates</b>				<b>Utility Consumption Estimates</b>					
<b>Facility</b>	<b>GSF</b>	<b>Irr. Acres</b>	<b>Commodity</b>	<b>Rate</b>	<b>Unit</b>	<b>Source</b>	<b>Rate</b>	<b>Unit</b>	
Hot Springs VAMC	464,000	15.0	Electricity	13.2 kWh/GSF	yr	EIA 2013a			
CBOC	16,711	0.5	Natural Gas	51.5 ft <sup>3</sup> /GSF	yr	EIA 2013b			
RRTP (100 bed)	78,675	1.0	Natural Gas	1,030 BTU/ft <sup>3</sup>		Propane 101			
RRTP (24 bed)	28,119	0.6	Propane	2,516 BTU/ft <sup>3</sup>		Propane 101			
MSOC	66,281	1.0	Propane	0.0278 gal/ft <sup>3</sup>		@ STP			
RRTP (76 bed)	66,661	0.7	Water, Clinic Avg.	0.10 gal/GSF	day	Stanford Univ.	0.1000 gal/GSF	day	
Fire Department	7,099	0.0	Water, Hospital	1,310 L/bed	day	Mays et. al.	346 gal/bed	day	
			Water, Hospital	177 gal/bed	day	Sutter Med. Ctr.	177 gal/bed	day	
			Water, Hospital	315 gal/bed	day	WaterSense	315 gal/bed	day	
			Water, Hospital Avg. (MSOC)	0.204 gal/GSF	day	Stanford Univ.	0.2040 gal/GSF	day	
			Water, Hotel	102 gal/room	day	WaterSense	102 gal/room	day	
			Water, Hotel/Motel (RRTP)	8.2 gal/HSF	mo	Morales et. al.	0.2696 gal/HSF	day	
			Water, Medical Office	25.2 L/m <sup>2</sup>	day	Mays et. al.	0.6185 gal/GSF	day	
			Water, Medical Office (CBOC)	3.98 gal/HSF	mo	Morales et. al.	0.1308 gal/HSF	day	
			Water, Medical Office	0.0375 gal/GSF	day	Sutter Med. Ctr.	0.0375 gal/GSF	day	
			Water, Nursing Home	503 L/bed	day	Mays et. al.	133 gal/bed	day	
			Water, Office	12 gal/worker	day	WaterSense	12 gal/worker	day	
			Water, Private Hospital	2.62 gal/HSF	mo	Morales et. al.	0.0861 gal/HSF	day	
			Water/Wastewater Ratio	1.0 gal :	gal	assumed			
			Water, Landscape Irrigation	610,000 gal/acre	yr	Sutter Med. Ctr. (CA)			
<b>Electricity and Heating:</b>									
<b>Alt.</b>	<b>RC GSF</b>	<b>HS GSF</b>	<b>RC Elec.</b>	<b>HS Elec.</b>	<b>Tot. Elec.</b>	<b>RC NG</b>	<b>RC NG</b>	<b>HS Prop.</b>	<b>HS Prop.</b>
	<b>kWh/yr</b>	<b>kWh/yr</b>	<b>kWh/yr</b>	<b>kWh/yr</b>	<b>kWh/yr</b>	<b>MMBTU/yr</b>	<b>MMBTU/yr</b>	<b>gal/yr</b>	<b>MMBTU/yr</b>
A	144,956	16,711	1,913,419	220,585	2,134,004	7,465,234	7,689	9,794	886
B	66,281	95,386	874,909	1,259,095	2,134,004	3,413,472	3,516	55,907	5,060
C	66,281	181,426	874,909	2,394,823	3,269,732	3,413,472	3,516	Fuel Oil	Fuel Oil
D	132,942	44,830	1,754,834	591,756	2,346,590	6,846,513	7,052	26,275	2,378
E	16,711	600,000	220,585	7,920,000	8,140,585	860,617	886	Fuel Oil	Fuel Oil
F	16,711	464,000	220,585	6,124,800	6,345,385	860,617	886	Fuel Oil	Fuel Oil
<b>Water and Wastewater:</b>									
<b>Alt.</b>	<b>RC GSF</b>	<b>HS GSF</b>	<b>RC H<sub>2</sub>O</b>	<b>RC H<sub>2</sub>O</b>	<b>RC H<sub>2</sub>O</b>	<b>HS H<sub>2</sub>O</b>	<b>HS H<sub>2</sub>O</b>	<b>HS H<sub>2</sub>O</b>	<b>HS H<sub>2</sub>O</b>
	<b>gal/yr</b>	<b>gal/yr</b>	<b>Indoor</b>	<b>Outdoor</b>	<b>Total</b>	<b>Indoor</b>	<b>Outdoor</b>	<b>Total</b>	<b>gal/yr</b>
A	144,956	16,711	12,676,903	1,220,000	13,896,903	798,117	305,000	1,103,117	798,117
B	66,281	95,386	4,935,283	610,000	5,545,283	915,000	9,454,737	8,539,737	8,539,737
C	66,281	181,426	4,935,283	610,000	5,545,283	6,214,427	9,300,000	15,514,427	6,214,427
D	132,942	44,830	11,494,726	1,037,000	12,531,726	3,565,027	671,000	4,236,027	3,565,027
E	16,711	600,000	798,117	305,000	1,103,117	798,117	20,551,940	20,551,940	20,551,940
F	16,711	464,000	798,117	305,000	1,103,117	798,117	15,893,500	15,893,500	11,654,239

The facilities are projected to be located within the utility service area of each city such that extensive construction of new utility connections (water supply, wastewater collection, electricity supply, and natural gas supply [Rapid City only]) would not be required.

Construction activities would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during construction activities would also likely be provided by offsite sources and would not adversely affect existing utility systems.

#### **4.14.2.2 Impacts from Operation**

##### **4.14.2.2.1 Water Supply and Wastewater Treatment**

Water use for the proposed new facilities in Rapid City is projected at 13.9 million gallons per year. This is 0.4 percent of the total water produced by the Rapid City Public Works Department in 2011. Wastewater generation for the new facilities in Rapid City is projected at 12.7 million gallons per year. This is 0.4 percent of the total wastewater treated by the Rapid City wastewater treatment plant. Projected water use and wastewater generation are not expected to have an adverse impact on Rapid City utilities.

Water use for the proposed new facility in Hot Springs is projected at 1.1 million gallons per year, and wastewater generation is projected at 0.8 million gallons per year. The Hot Springs City Engineer stated that system capacity exists for new water users. The projected wastewater generation rate is significantly reduced from the current campus wastewater generation rate; as noted in Section 3.14, decreasing volumes of wastewater also result in decreased wastewater revenue for the City of Hot Springs. The Hot Springs City Engineer noted that concerns have been raised regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being significantly lower than the design flow. However, it is unknown at what average flow such conditions would develop (Bastian 2014). A significant reduction in inflow from VA operations could result in adverse impacts to the Hot Springs wastewater treatment plant.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new facilities.

##### **4.14.2.2.2 Electricity**

The new facilities would consume approximately 220,600 kilowatt-hours per year in the Hot Springs area and approximately 1,913,400 kilowatt-hours per year in the Rapid City area. This electricity consumption rate is projected to decrease from current operating conditions and would not result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy elements into facility design could further reduce the electricity consumption rate of new facilities.

##### **4.14.2.2.3 Heating**

Natural gas supply is available for consumers in the Rapid City area. The new facilities in Rapid City would consume approximately 7,500,000 ft<sup>3</sup>/year (approximately 7,700 million Btu/year) of natural gas. This natural gas consumption would not result in an adverse impact to area natural gas utilities.

New facilities constructed in the Hot Springs area are assumed to consume propane for heating purposes. The new facility in Hot Springs would consume approximately 9,800 gallons per year of propane. Fuel oil consumption at the existing facility would be reduced to that necessary to shutter and maintain buildings until eventual reuse. Adverse impacts on propane and fuel oil suppliers are not expected as a result of the new Hot Springs facility.

Incorporation of energy efficiency elements into facility design could reduce the natural gas and propane consumption rate of new facilities.

#### **4.14.2.2.4 Communications**

Telephone, television, and internet services are currently provided in both Hot Springs and Rapid City. Transferring these services to other facility locations in the area would not result in adverse impacts to area communication utilities.

### **4.14.3 Alternative A-2**

The following assumptions pertain to the facilities under Alternative A2:

- Existing CBOC, Hot Springs – approximately 45,841 GSF, moderate landscape irrigation requirements
- RRTP (100-bed facility), Rapid City – approximately 78,675 GSF, moderate landscape irrigation requirements
- MSOC, Rapid City – approximately 66,281 GSF, minimal landscape irrigation requirements

#### **4.14.3.1 Impacts from Construction**

The facilities are projected to be located within the utility service area of each city such that extensive construction of new utility connections (water supply, wastewater collection, electricity supply, and natural gas supply [Rapid City only]) would not be required.

Construction activities would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during construction activities would also likely be provided by offsite sources and would not adversely affect existing utility systems.

#### **4.14.3.2 Impacts from Operation**

##### **4.14.3.2.1 Water Supply and Wastewater Treatment**

Water use for the proposed new facilities in Rapid City is projected at 13.9 million gallons per year. This is 0.4 percent of the total water produced by the Rapid City Public Works Department in 2011. Wastewater generation for the new facilities in Rapid City is projected at 12.7 million gallons per year. This is 0.4 percent of the total wastewater treated by the Rapid City wastewater treatment plant. Projected water use and wastewater generation are not expected to have an adverse impact on Rapid City utilities.

Water use for the existing VA CBOC facility in Hot Springs is projected at 4.5 million gallons per year, and wastewater generation is projected at 2.2 million gallons per year. The projected wastewater generation rate is reduced from the current campus wastewater generation rate; as noted in Section 3.14, decreasing volumes of wastewater also result in decreased wastewater revenue for the City of Hot Springs. The Hot Springs City Engineer noted that concerns have been raised regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being significantly lower than the design flow. However, it is unknown at what average flow such conditions would develop (Bastian 2014). A reduction in inflow from VA operations could result in adverse impacts to the Hot Springs wastewater treatment plant.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new facilities.

#### **4.14.3.2.2 Electricity**

The new facilities would consume approximately 605,000 kilowatt-hours per year in the Hot Springs area and approximately 1,913,400 kilowatt-hours per year in the Rapid City area. This electricity consumption rate is projected to decrease from current operating conditions and would not result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy elements into facility design could further reduce the electricity consumption rate of new facilities.

#### **4.14.3.2.3 Heating**

Natural gas supply is available for consumers in the Rapid City area. The new facilities in Rapid City would consume approximately 7,500,000 ft<sup>3</sup>/year (approximately 7,700 million Btu/year) of natural gas. This natural gas consumption would not result in an adverse impact to area natural gas utilities.

The existing CBOC facility at the Hot Springs Campus is assumed to continue use of fuel oil for heating purposes. The fuel oil consumption rate would be less compared to current operating conditions and would not result in an adverse impact to fuel oil suppliers.

Incorporation of energy efficiency elements into facility design could reduce the natural gas and propane consumption rate of new facilities.

#### **4.14.3.2.4 Communications**

Telephone, television, and internet services are currently provided in both Hot Springs and Rapid City. Transferring these services to other facility locations in the area would not result in adverse impacts to area communication utilities.

### **4.14.4 Alternative B**

The following assumptions pertain to the facilities under Alternative B:

- CBOC, Hot Springs – approximately 16,711 GSF, minimal landscape irrigation requirements
- RRTP (100-bed facility), Hot Springs – approximately 78,675 GSF, moderate landscape irrigation requirements
- MSOC, Rapid City – approximately 66,281 GSF, minimal landscape irrigation requirements

#### **4.14.4.1 Impacts from Construction**

The facilities are projected to be located within the utility service area of each city such that extensive construction of new utility connections (water supply, wastewater collection, electricity supply, and natural gas supply [Rapid City only]) would not be required.

Construction activities would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during construction activities would also likely be provided by offsite sources and would not adversely affect existing utility systems.

#### **4.14.4.2 Impacts from Operation**

##### **4.14.4.2.1 Water Supply and Wastewater Treatment**

Water use for the new facility in Rapid City is projected at 5.5 million gallons per year. This is 0.2 percent of the total water produced by the Rapid City Public Works Department in 2011. Wastewater generation for the new facility in Rapid City is projected at 4.9 million gallons per year. This is 0.1 percent of the total wastewater treated by the Rapid City wastewater treatment plant. Projected water use and wastewater generation are not expected to have an adverse impact on Rapid City utilities.

Water use for the new facilities in Hot Springs is projected at 9.5 million gallons per year, and wastewater generation is projected at 8.5 million gallons per year. The Hot Springs City Engineer stated that system capacity exists for new water users. Additionally, the water rights held by the VA could be reused/transferred to accommodate the new facilities. The projected wastewater generation rate is reduced from the current campus wastewater generation rate; as noted in Section 3.14, decreasing volumes of wastewater also result in decreased wastewater revenue for the City of Hot Springs. The Hot Springs City Engineer noted that concerns have been raised regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being significantly lower than the design flow. However, it is unknown at what average flow such conditions would develop (Bastian 2014). A reduction in inflow from VA operations could result in adverse impacts to the Hot Springs wastewater treatment plant.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new facilities.

##### **4.14.4.2.2 Electricity**

The new facilities would consume approximately 1,260,000 kilowatt-hours per year in the Hot Springs area and approximately 875,000 kilowatt-hours per year in the Rapid City area. This electricity consumption rate is projected to decrease from current operating conditions and would not result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy elements into facility design could further reduce the electricity consumption rate of new facilities.

#### **4.14.4.2.3 Heating**

Natural gas supply is available for consumers in the Rapid City area. The new facility in Rapid City would consume approximately 3,400,000 ft<sup>3</sup>/year (approximately 3,500 million Btu/year) of natural gas. This natural gas consumption would not result in an adverse impact to area natural gas utilities.

New facilities constructed in the Hot Springs area are assumed to consume propane for heating purposes. The new facility in Hot Springs would consume approximately 55,900 gallons per year of propane. Fuel oil consumption at the existing facility would be reduced to that necessary to shutter and maintain buildings until eventual reuse. Adverse impacts on propane and fuel oil suppliers are not expected as a result of the new Hot Springs facility.

Incorporation of energy efficiency elements into facility design could reduce the natural gas and propane consumption rate of new facilities.

#### **4.14.4.2.4 Communications**

Telephone, television, and internet services are currently provided in both Hot Springs and Rapid City. Transferring these services to other facility locations in the area would not result in adverse impacts to area communication utilities.

### **4.14.5 Alternative C**

The following assumptions pertain to the facilities under Alternative C:

- CBOC and RRTP (100-bed facility), Hot Springs – assumed CBOC would occupy 45,841 GSF within existing 134,918 GSF hospital building, continued use of 135,585 GSF in the domiciliary and administration building for a 100-bed RRTP, significant landscape irrigation requirements
- MSOC, Rapid City – approximately 66,281 GSF, minimal landscape irrigation requirements

#### **4.14.5.1 Impacts from Construction**

The new facility in Rapid City is projected to be located within the utility service area such that extensive construction of new utility connections (water supply, wastewater collection, electricity supply, and natural gas supply) would not be required.

Renovation activities at the Hot Springs Campus would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during renovation activities could be accommodated by existing onsite systems and would not adversely affect existing utility systems.

#### **4.14.5.2 Impacts from Operation**

##### **4.14.5.2.1 Water Supply and Wastewater Treatment**

Water use for the new facility in Rapid City is projected at 5.5 million gallons per year. This is 0.2 percent of the total water produced by the Rapid City Public Works Department in 2011.



Wastewater generation for the new facility in Rapid City is projected at 4.9 million gallons per year. This is 0.1 percent of the total wastewater treated by the Rapid City wastewater treatment plant. Projected water use and wastewater generation are not expected to have an adverse impact on Rapid City utilities.

Water use and wastewater generation for the renovated facilities in Hot Springs are projected to decrease compared to current operation rates. Water use for the renovated facilities on the VA Hot Springs Campus is projected at 15.5 million gallons per year based on the use rate assumptions stated above, and wastewater generation is projected at 6.2 million gallons per year based on the use rate assumptions. Water would continue to be supplied by the natural spring, at a decreased rate compared to the current 25.2 million gallons per year. The projected wastewater generation rate would also be expected to be reduced, as compared to the current campus wastewater generation rate of 11.7 million gallons. (Note that the use rate assumptions have overpredicted wastewater generation on the Hot Springs Campus compared to current rates, but a reduction would be expected.) As noted in Section 3.14, such a reduction could result in decreased wastewater revenue for the City of Hot Springs. The Hot Springs City Engineer noted that concerns have been raised regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being significantly lower than the design flow. However, it is unknown at what average flow such conditions would develop (Bastian 2014). A significant reduction in inflow from VA operations could result in adverse impacts to the Hot Springs wastewater treatment plant.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new and renovated facilities.

#### **4.14.5.2.2 Electricity**

The new and renovated facilities would consume approximately 2,395,000 kilowatt-hours per year in the Hot Springs area and approximately 875,000 kilowatt-hours per year in the Rapid City area. This electricity consumption rate is similar to current operating conditions and would not result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy elements into facility design could further reduce the electricity consumption rate of new and renovated facilities.

#### **4.14.5.2.3 Heating**

Natural gas supply is available for consumers in the Rapid City area. The new facility in Rapid City would consume approximately 3,400,000 ft<sup>3</sup>/year (approximately 3,500 million Btu/year) of natural gas. This natural gas consumption would not result in an adverse impact to area natural gas utilities.

Renovated facilities (and existing facilities) at the Hot Springs Campus are assumed to continue use of fuel oil for heating purposes. The fuel oil consumption rate would be less compared to current operating conditions and would not result in an adverse impact to fuel oil suppliers.

Incorporation of energy efficiency elements into facility design could reduce the natural gas and fuel oil consumption rate of new and renovated facilities.

#### **4.14.5.2.4 Communications**

Telephone, television, and internet services are currently provided in both Hot Springs and Rapid City. Transferring these services to other facility locations or continuing services would not result in adverse impacts to area communication utilities.

#### **4.14.6 Alternative D**

The following assumptions pertain to the facilities under Alternative D:

- CBOC, Hot Springs – approximately 16,711 GSF, minimal landscape irrigation requirements
- RRTP (24-bed facility), Hot Springs – approximately 28,119 GSF, moderate landscape irrigation requirements
- MSOC, Rapid City – approximately 66,281 GSF, minimal landscape irrigation requirements
- RRTP (76-bed facility), Rapid City, SD – approximately 66,661 GSF, moderate landscape irrigation requirements

##### **4.14.6.1 Impacts from Construction**

The facilities are projected to be located within the utility service area of each city such that extensive construction of new utility connections (water supply, wastewater collection, electricity supply, and natural gas supply [Rapid City only]) would not be required.

Construction activities would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during construction activities would also likely be provided by offsite sources and would not adversely affect existing utility systems.

##### **4.14.6.2 Impacts from Operation**

###### **4.14.6.2.1 Water Supply and Wastewater Treatment**

Water use for the new facilities in Rapid City is projected at 12.5 million gallons per year. This is 0.4 percent of the total water produced by the Rapid City Public Works Department in 2011. Wastewater generation for the new facilities in Rapid City is projected at 11.5 million gallons per year. This is 0.3 percent of the total wastewater treated by the Rapid City wastewater treatment plant. Projected water use and wastewater generation are not expected to have an adverse impact on Rapid City utilities.

Water use for the new facilities in Hot Springs is projected at 4.2 million gallons per year, and wastewater generation is projected at 3.6 million gallons per year. The Hot Springs City Engineer stated that system capacity exists for new water users. The projected wastewater generation rate is significantly reduced from the current campus wastewater generation rate; as noted in Section 3.14, decreasing volumes of wastewater also result in decreased wastewater revenue for the City of Hot Springs. The Hot Springs City Engineer noted that concerns have been raised regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being significantly lower than the design flow. However, it is unknown at what average flow such conditions would develop

(Bastian 2014). A significant reduction in inflow from VA operations could result in adverse impacts to the Hot Springs wastewater treatment plant.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new facilities.

#### **4.14.6.2.2 Electricity**

The new facilities would consume approximately 590,000 kilowatt-hours per year in the Hot Springs area and approximately 1,755,000 kilowatt-hours per year in the Rapid City area. This electricity consumption rate is projected to decrease from current operating conditions and would not result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy elements into facility design could further reduce the electricity consumption rate of new facilities.

#### **4.14.6.2.3 Heating**

Natural gas supply is available for consumers in the Rapid City area. The new facilities in Rapid City would consume approximately 6,800,000 ft<sup>3</sup>/year (approximately 7,100 million Btu/year) of natural gas. This natural gas consumption would not result in an adverse impact to area natural gas utilities.

New facilities constructed in the Hot Springs area are assumed to consume propane for heating purposes. The new facilities in Hot Springs would consume approximately 26,300 gallons per year of propane. Fuel oil consumption at the existing facility would be reduced to that necessary to shutter and maintain buildings until eventual reuse, preservation, or demolition. Adverse impacts on propane and fuel oil suppliers are not expected as a result of the new Hot Springs facilities.

Incorporation of energy efficiency elements into facility design could reduce the natural gas and propane consumption rate of new facilities.

#### **4.14.6.2.4 Communications**

Telephone, television, and internet services are currently provided in both Hot Springs and Rapid City. Transferring these services to other facility locations in the area would not result in adverse impacts to area communication utilities.

### **4.14.7 Alternative E**

The following assumptions pertain to the facilities under Alternative E:

- Facility renovations/expansions, Hot Springs – assumed 600,000 GSF, significant landscape irrigation requirements
- MSOC, Rapid City – approximately 66,281 GSF, minimal landscape irrigation requirements
- 

#### **4.14.7.1 Impacts from Construction**

The new facility in Rapid City is projected to be located within the utility service area such that extensive construction of new utility connections (water supply, wastewater collection, electricity supply, and natural gas supply) would not be required.

Renovation and expansion activities in Hot Springs would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during construction and renovation activities can be accommodated by existing onsite systems and would not adversely affect existing utility systems.

#### **4.14.7.2 Impacts from Operation**

##### **4.14.7.2.1 Water Supply and Wastewater Treatment**

Water use for the new facility in Rapid City is projected at 5.5 million gallons per year. This is 0.2 percent of the total water produced by the Rapid City Public Works Department in 2011. Wastewater generation for the new facility in Rapid City is projected at 4.9 million gallons per year. This is 0.1 percent of the total wastewater treated by the Rapid City wastewater treatment plant. Projected water use and wastewater generation are not expected to have an adverse impact on Rapid City utilities.

Water use and wastewater generation for the renovated and expanded facilities in Hot Springs, SD are projected to increase from current operation rates. Water would continue to be supplied by the natural spring. If necessary, the Hot Springs City Engineer stated that system capacity exists for new water users, and increased flows to the wastewater treatment plant would help to alleviate concerns regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being significantly lower than the design flow (Bastian 2014). Projected water use and wastewater generation are not expected to have an adverse impact on Hot Springs utilities.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new and renovated facilities.

##### **4.14.7.2.2 Electricity**

The renovated and expanded facilities would consume approximately 7,920,000 kilowatt hours per year in the Hot Springs area, and the new facility would consume approximately 875,000 kilowatt-hours per year in the Rapid City area. This electricity consumption rate would not result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy elements into facility design could further reduce the electricity consumption rate of new and renovated facilities.

##### **4.14.7.2.3 Heating**

Natural gas supply is available for consumers in the Rapid City area. The new facility in Rapid City would consume approximately 860,000 ft<sup>3</sup>/year (approximately 3,500 million Btu/year) of natural gas. This natural gas consumption would not result in an adverse impact to area natural gas utilities.

Renovated and expanded facilities (and existing facilities) at the Hot Springs Campus are assumed to continue use of fuel oil for heating purposes. The fuel oil consumption rate is assumed to be similar to current operating conditions and would not result in an adverse impact to fuel oil suppliers.

Incorporation of energy efficiency elements into facility design could reduce the natural gas and fuel oil consumption rate of new and renovated facilities.

#### **4.14.7.2.4 Communications**

Telephone, television, and internet services are currently provided in both Hot Springs and Rapid City. Transferring these services to other facility locations in the area would not result in adverse impacts to area communication utilities.

### **4.14.8 Alternative F**

Under Alternative F, current operations would continue at the existing facilities at the Hot Springs Campus and the CBOC in Rapid City. The following assumptions pertain to these facilities:

- Campus, Hot Springs – assumed 464,000 GSF, significant landscape irrigation requirements
- CBOC, Rapid City – approximately 16,711 GSF, minimal landscape irrigation requirements

#### **4.14.8.1 Impacts from Construction**

CBOC operations in Rapid City would continue, presumably at the present facility location. Construction of new utility connections would not be required.

Operations on Hot Springs Campus would also continue, although some building renovations may be undertaken over time. Renovation activities in Hot Springs would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during renovation could be accommodated by existing onsite systems and would not adversely affect existing utility systems.

#### **4.14.8.2 Impacts from Operation**

##### **4.14.8.2.1 Water Supply and Wastewater Treatment**

Water use for the CBOC facility in Rapid City is projected at 1.1 million gallons per year. This is 0.03 percent of the total water produced by the Rapid City Public Works Department in 2011. Wastewater generation for the new facility in Rapid City is projected at 0.8 million gallons per year. This is 0.02 percent of the total wastewater treated by the Rapid City wastewater treatment plant. Projected water use and wastewater generation are not expected to have an adverse impact on Rapid City utilities.

Water use and wastewater generation for the facilities in Hot Springs are projected to remain at current operation rates. Water would continue to be supplied by the natural spring. The potential for water use and wastewater generation rates to increase or decrease from current levels exists. If necessary, the Hot Springs City Engineer stated that system capacity exists for new water users, and increased flows to the wastewater treatment plant would help to alleviate concerns regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being significantly lower than the design flow (Bastian 2014). Projected water use and wastewater generation are not expected to have an adverse impact on Hot Springs utilities.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new and renovated facilities.

#### **4.14.8.2.2 Electricity**

The existing facilities would consume approximately 6,125,000 kilowatt-hours per year in the Hot Springs area, and the current facility would consume approximately 220,000 kilowatt-hours per year in the Rapid City area. This electricity consumption rate would not result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy elements into facility design could further reduce the electricity consumption rate of new and renovated facilities.

#### **4.14.8.2.3 Heating**

Natural gas supply is available for consumers in the Rapid City area. The current facility in Rapid City would consume approximately 860,000 ft<sup>3</sup>/year (approximately 900 million Btu/year) of natural gas. This natural gas consumption would not result in an adverse impact to area natural gas utilities.

Existing facilities at the Hot Springs Campus are assumed to continue use of fuel oil for heating purposes. The fuel oil consumption rate is assumed to be similar to current operating conditions and would not result in an adverse impact to fuel oil suppliers.

Incorporation of energy efficiency elements into facility design could reduce the natural gas and fuel oil consumption rate of new and renovated facilities.

#### **4.14.8.2.4 Communications**

Telephone, television, and internet services are currently provided in both Hot Springs and Rapid City. The No Action Alternative would not result in adverse impacts to area communication utilities.

### **4.14.9 Supplemental Alternative G**

Under Supplemental Alternative G, some or all of the existing facilities on the VA Hot Springs Campus would be reused by other tenants. Depending on the intended use, some facility renovation may be required.

#### **4.14.9.1 Impacts from Construction**

If required, renovation activities in Hot Springs would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during construction and demolition activities could be accommodated by existing onsite systems and would not adversely affect existing utility systems.

#### **4.14.9.2 Impacts from Operation**

##### **4.14.9.2.1 Water Supply and Wastewater Treatment**

If Hot Springs Campus facilities are repurposed, water use and wastewater generation in Hot Springs could increase. Water could continue to be supplied to the repurposed facilities by the natural spring. If necessary, the Hot Springs City Engineer stated that system capacity exists for new water users, and increased flows to the wastewater treatment plant would help to alleviate concerns regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being



significantly lower than the design flow (Bastian 2014). Projected water use and wastewater generation are not expected to have an adverse impact on Hot Springs utilities.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new and renovated facilities.

#### **4.14.7.2.2 Electricity**

If Hot Springs Campus facilities are repurposed, regional electricity consumption could increase. The level of increase would depend on the extent to which facilities are repurposed and the function of the tenant, but would not be expected to result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy elements into facility design could further reduce the electricity consumption rate of new and renovated facilities.

#### **4.14.7.2.2 Heating**

Repurposed facilities at the Hot Springs Campus are assumed to continue use of fuel oil for heating purposes, although conversion to propane could be considered. The fuel oil or propane requirement would depend on the extent to which facilities are repurposed and the function of the tenant, but would not be expected to result in an adverse impact to fuel oil or propane suppliers.

Incorporation of energy efficiency elements into facility design could reduce the fuel oil or propane consumption rate of new and renovated facilities.

#### **4.14.7.2.3 Communications**

Telephone, television, and internet services are currently provided in Hot Springs and available to new users. The supplemental alternative would not result in adverse impacts to area communication utilities.

## 4.15 Environmental Justice

### 4.15.1 Evaluation Criteria

An analysis of environmental justice determines whether a disproportionate share of adverse human health or environmental impacts from implementing a federal action would be borne by minority or low-income populations.

The CEQ (1997) guidance states that, to determine whether impacts to minority or low-income populations are disproportionately high and adverse, agencies should consider the following:

- For human health effects (including bodily impairment, infirmity, illness, or death), whether:
  - Risks or rates of health effects are significant (as the term is used in NEPA analyses) or above generally accepted norms
  - The risk or rate of exposure to an environmental hazard for a minority or low-income population is significant and appreciably exceeds or is likely to exceed the risk or exposure rate for the general population.
  - Health effects occur in a minority or low-income population affected by cumulative or multiple adverse exposures from environmental hazards
- For environmental effects (ecological, cultural, human health, economic, or social impacts), whether:
  - There is or would be an impact on the natural or physical environment that significantly and adversely affects a minority or low-income population when those impacts are interrelated to impacts on the natural or physical environment
  - Environmental effects are significant (as the term is used in NEPA analyses) and are or may be having an adverse impact on minority or low-income populations that appreciably exceeds or is likely to appreciably exceed those on the general population
  - The environmental effects occur or would occur in a minority or low-income population by cumulative or multiple adverse exposures from environmental hazards

As described in Section 3.15, the affected area for the environmental justice analysis is the VA BHHCS service area, including counties in the states of South Dakota, Nebraska, and Wyoming. The South Dakota counties of Bennett, Corson, Dewey, Jackson, Lyman, Mellette, Oglala Lakota, Todd, and Ziebach are environmental justice communities in the VA BHHCS service area based on guidance in CEQ (1997), as described in Section 3.15.1.2. There are no environmental justice communities in the VA BHHCS service area in Nebraska or Wyoming. Therefore, the environmental justice impact analysis for the reconfiguration proposal is limited to the nine South Dakota counties listed above. Fall River and Pennington Counties, where the physical effects of any alternative would occur, do not have any environmental justice communities.

Section 2.1 provides a discussion of the improved geographic access to health care—including primary, secondary, and tertiary care—that would be available throughout the catchment area under the VA BHHCS services reconfiguration proposal. Overall, the services reconfiguration proposal improves geographic access, as summarized in Table 2-2 in Section 2.1. While services are not a

focus of the impact analysis in this EIS (see Section 1.3), it is important to note that this would be a beneficial effect for all Veterans in the catchment area, including those in minority and low-income populations. Attaining improved geographic access to care in this rural health care system is one of the main objectives of the services reconfiguration resulting in VA's proposed changes to the facilities in Hot Springs and Rapid City.

#### **4.15.2 All Alternatives - Construction**

Construction impacts to all resources would be limited to the vicinity of the construction in the areas of Hot Springs (Fall River County) and Rapid City (Pennington County). Neither of these counties was defined as having an environmental justice community; thus, environmental or health impacts would not be disproportionately borne by any environmental justice community.

Construction sites that are in close proximity to areas with higher concentrations of children, such as schools or parks, could attract unauthorized entry by children. Active construction sites are generally monitored or secured by fencing so the potential for unauthorized entry resulting in a safety risk would be minimal. Construction would not have environmental health risks or safety risks that would disproportionately affect children.

#### **4.15.3 All Alternatives - Operation**

The operational impacts of the reconfiguration under any alternative would occur predominantly in the areas of Hot Springs (Fall River County) and Rapid City (Pennington County). Neither of these counties was defined as having a minority or low-income population; thus, environmental or health impacts would not be disproportionately borne by any environmental justice community. The reconfiguration under any alternative would not affect the existing VA BHHCS facilities located in the counties that have minority or low-income populations: a therapy program office in McLaughlin (Corson County), CBOCs in Eagle Butte and Isabel (Dewey County), CBOC and compensated work therapy facility in Pine Ridge (Oglala Lakota County), and a CBOC in Mission (Todd County).

Improving travel time to access health care is one of the underlying conditions that contribute to the need for the VA BHHCS reconfiguration proposal (see Section 1.2.2.2.2, *Distance Veterans Must Travel for Care*). Alternatives A-1, A-2, B, C, or D would improve overall geographic access to care (see Table 2-2 in Chapter 2). As summarized in Table 2-1 in Chapter 2, primary and specialty health care services under Alternatives A-1, A-2, B, C, or D would continue in Hot Springs at a new CBOC, renovated Building 12 on the campus, or community facilities, and services would expand at a new MSOC in the Rapid City area where more Veterans are served. The changes in travel time and distance to receive care would benefit most Veterans in the VA BHHCS catchment area. For Veterans who are closer to Hot Springs than Rapid City, the change in location of VA's RRTP services from Hot Springs to Rapid City under Alternative A is the only service for which the distance would increase. This change to travel time and distance would not be disproportionately borne by Veterans from minority or low-income populations any more so than Veterans from the general population; therefore, this would not be an environmental justice impact. Alternatives E and F would retain the current levels of geographic access, with no beneficial effect to travel time and distance.

Supplemental Alternative G is limited to potential re-use scenarios at the VA Hot Springs Campus. Although the nature of any such re-use has not yet been determined, any effects are expected to be

localized, with no potential for adverse operational impacts to environmental justice populations in the nine listed counties.

The operations conducted under any alternative for the VA BHHCS reconfiguration proposal would continue to be provision of health care services to Veterans and their families, and would not have environmental health risks or safety risks that would disproportionately affect children.

## **4.16 Cumulative Impacts**

Section 3.16 identified the other past, present, and reasonably foreseeable future actions that may occur within the VA BHHCS service area. Actions in Hot Springs include expansion of the State Veterans Home, updating and relocating a community nursing home, new water distribution, and highway repair and reconstruction. Actions in Rapid City include new electricity transmission, road improvements and reconstruction, and residential developments.

Scoping for this EIS included requests that the cumulative impact analysis evaluate the effects of VA's changes to health care services at the Hot Springs Campus since the mid-1990s. These changes, which included past reductions in staffing, related only to the offering of specific health care services from various locations, and were not subject to NEPA review (see Section 1.3), even if they affected the local economy. This is consistent with CEQ NEPA guidance at 40 CFR 1508.14 that says: "economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment." Such changes in health care and staffing resources are at VA's discretion in order to carry out the terms of its mission and provide the best quality care possible to Veterans. That said, the cumulative impact analysis in the Final EIS has been revised to address the change in employment and economic conditions that have occurred in Fall River County and the Hot Springs community over the past 10 to 20 years, based on available 2000 Census data. This is partly in response to public comments on the Draft EIS, but also consistent with EPA and CEQ guidance that recommends the examination of past trends as a way to look at the accumulated effect of past actions.

The Final EIS also recognizes (1) VA's potential use of the Hot Springs campus as a site for the national Member Services Call Center, and (2) recently completed renovations at the Fort Meade campus, even though neither are considered to be within the scope of the proposed reconfiguration (see Sections 1.1.2.1 and 1.1.2.2). Both are addressed as part of the cumulative impact analysis, however, consistent with the CEQ NEPA regulations and recent CEQ cumulative impact guidance; the Fort Meade recently completed construction are also being addressed in response to public comment.

A new National VHA National Pharmacy call center is proposed for the Hot Springs Campus and could open before the end of 2016. The call center would operate out of Buildings 3 and 4 on the existing VA BHHCS Hot Springs Campus. The call center would involve outfitting interior space of the vacant historic buildings to accommodate approximately 120 employee workstations. The space in these buildings is currently either underutilized or vacant such that health care services currently provided at the Hot Springs Campus would not be affected by the new call center.

Because it is a reasonably foreseeable future action that would occur on the existing Hot Springs Campus, it is being addressed as part of the cumulative impact analysis under the resource specific impacts discussions. Overall impacts from the proposed call center are expected to be minimal as the required renovations would be limited to interior work only. Specifically, the project would include installation of modular workstations within the existing interior floorplan for approximately 120 employees and involve installation of telecommunications and power cabling (some surface mounted), and new surface treatments such as flooring and paint.

The interior of buildings 3 and 4 would be configured to accommodate approximately 120 workstations. The new workstations would be movable, modular furniture. No walls would be added or removed. New telecommunication and power cabling would use existing conduits if available or new surface mounted conduit as required.

VA BHHCS is in the process of conducting the appropriate level of NEPA review for the proposed Member Service call center. The call center is expected to qualify as a categorical exclusion.

With respect to potential cumulative impacts from the renovation activities at Fort Meade, the construction work at Fort Meade would be completed before any new construction or renovation activities would begin in Hot Springs or Rapid City. Therefore, there would be no overlap in construction workforce personnel even under the likely scenario where the construction workforce would be drawn from the same area (e.g., Rapid City/Pennington County). Any air or water emissions or ground disturbances at Fort Meade are at sufficient distance to have no potential cumulative impact on environmental resources found in the Hot Springs and Rapid City area. The proposed reconfiguration of services within the VA BHHCS is not anticipated to require physical plant changes at the VA Fort Meade campus; no effects to historic properties at Fort Meade or nearby areas are anticipated. Therefore, there would be no cumulative impacts on historic properties from the VA actions occurring at Fort Meade in combination with proposed reconfiguration activities in Hot Springs and Rapid City.

Cumulative impacts from these actions or other potential future actions together with those of any of the EIS alternatives are expected to be absent, negligible or minor for aesthetics, air quality, geology and soils, hydrology and water quality, wildlife and habitat, noise, floodplains and wetlands, community services, solid waste and hazardous materials, utilities, and environmental justice. Any impacts to these resources would be similar to current VA health care services operations or to other new private and commercial developments that may occur within Hot Springs and Rapid City, and would include mitigation measures to minimize impacts as described in Chapter 5.

#### **4.16.1 Cultural Resources**

Direct or indirect adverse effects to historic properties from implementing any of the reconfiguration alternatives could further diminish the integrity of that property should any of the other past, present, or reasonably foreseeable projects also adversely affect the same property.

There could be a cumulative direct effect to the Hot Springs Historic District if exterior renovations, new construction, and aesthetic changes on the VA Hot Springs Campus, together with other ongoing and planned construction in Hot Springs, contrast with the historic setting, feeling, and association of the Hot Springs Historic District. The measures to resolve adverse effects described in Chapter 5 are designed to avoid or minimize these effects. It is not anticipated that changes to the VA Hot Springs Campus will necessitate removal of the Battle Mountain Sanitarium listing as a contributing element to the Hot Springs Historic District due to the commitments made in the measures to resolve adverse effects to historic properties (Section 5.2.).

Changes in local economic conditions could alter the use and upkeep of historic commercial areas in Hot Springs and Rapid City. These changes have the potential for indirect effects to accumulate on such historic properties. However, ongoing and planned construction projects in Hot Springs and Rapid City, including proposed construction for the reconfiguration alternatives, could temporarily



cumulatively benefit local economies, and potentially could indirectly benefit historic properties by negating changes in use and upkeep. There would be no impacts to the economies of Hot Springs or Rapid City from changes in employment under any reconfiguration alternative that, together with changes in employment associated with other development projects, could result in significant cumulative indirect effects to historic properties.

A South Dakota Department of Transportation project to expand Highway 385 through Hot Springs required demolition of the historic Sturdley building in the Spring of 2016. This action was not sufficient to necessitate removal of the Hot Springs Historic District from the NRHP. The proposed VA reconfiguration would have no direct impact on the historic structures in downtown Hot Springs, and since the measures described in Chapter 5 place limitations on alterations to the VA Hot Springs Campus so changes will not warrant removal of the Battle Mountain Sanitarium as a contributing element to the Hot Springs Historic District, there would be no cumulative impact associated with the state DOT action.

There could be cumulative adverse effects to archaeological resources from ground disturbance in the Hot Springs and Rapid City areas from ongoing and planned construction, together with construction proposed for the reconfiguration alternatives. The significance of any cumulative adverse effect would depend on the extent of archaeological resources encountered, and how other projects mandatorily or voluntarily address such resources.

The identified area of potential effect (APE) for historic properties of the call center is confined to the Hot Springs VA Campus. The minor modifications necessary to implement this undertaking are limited to Buildings 3 and 4. These buildings are contributing elements to the Battle Mountain Sanitarium National Historic Landmark. The Secretary of the Interior designated the Battle Mountain Sanitarium a National Historic Landmark on 6/17/2011. Originally used for patient care as part of the National Home for Disabled Volunteer Soldiers, the interior was modified over the years for various uses but is currently either underutilized or vacant. The proposed modifications are not anticipated to adversely affect the historic integrity of Buildings 3 and 4. VA received SHPO's concurrence of no adverse effect on October 27, 2016 (Horsman 2016b).

Changes to utilities, including telephone lines, to address the needs of call center staff could adversely affect archaeological deposits and the landscape of the Battle Mountain Sanitarium, however, no changes to utilities are planned as part of the call center installation or operation.

Construction of parking lots on the Hot Springs VA Campus has the potential to affect archaeological deposits and the character-defining features of the Battle Mountain Sanitarium, including direct effect to the landscape and viewshed effects to the contributing buildings. The Hot Springs VA Campus currently has sufficient parking to accommodate the increased staff load associated with the call center and no construction of parking lots is planned at this time.

Operation of a call center in Buildings 3 and 4 may necessitate modification of some service-designated areas under Alternatives C and F (i.e., clinical space and/or administrative offices planned for Building 3 may have to be relocated to another building). Because Alternative E would use Building 4, there would not be sufficient bed space to accommodate the 160 beds included in this alternative. Only 119 beds could be configured in private and semi-private rooms in Buildings 4 through 8. Therefore, if Alternative E were selected, the call center would have to be relocated to another area on the Hot Springs campus. Changes to the locations of certain services are not

anticipated to affect historic properties beyond those alterations analyzed in this EIS. The potential effects of these possible changes therefore are addressed by the measures to resolve adverse effects included in Section 5.2. Overall, there is no increase in impacts from the proposed reconfiguration as a result of the call center.

Supplemental Alternative G includes the reuse of the Hot Springs VA Campus by an entity other than the VA BHHCS. Alternatives A2 and C take into account partial relocation of the VA BHHCS and therefore a “shared campus” if Supplemental Alternative G is successfully implemented. The marketing strategy included in the measures to resolve adverse effects takes into account this potential outcome. Additionally, redevelopment of the campus would be subject to the restrictions of the measures to resolve adverse effects which seek to avoid or minimize adverse effects to the Battle Mountain Sanitarium and the Hot Springs Historic District. The potential effects of a shared campus, which would include the proposed call center, therefore are addressed by the measures to resolve adverse effects included in Section 5.2.

## **4.16.2 Land Use and Other Natural Resources**

For alternatives that include construction (A, B, C, and D), the potential for cumulative impacts related to land use depends on the specific site(s) selected and the existing adjacent and nearby land uses. Construction of a new VA facility, particularly if it is in an area in which other building or roadway construction is ongoing, could have a short-term adverse effect on residents or businesses use and enjoyment of their property in case of increased noise and traffic; this type of cumulative effect would be temporary, occurring only while the construction projects overlap in time. For Supplemental Alternative G, possible non-federal re-use scenarios could increase the locations in Hot Springs available for various uses, competing with existing private and commercial parcels that may be offered to potential users.

Because all construction and operation activities associated with the new call center would occur within the interior of existing buildings 3 and 4, and the work is expected to be confined mainly to electrical upgrading and rewiring, there would be no adverse impacts to existing land use or other natural resources in the area (e.g., aesthetics, air quality, soils, water quality, wildlife and habitat) on the existing campus. Implementation of Alternative E would require that the call center be moved to another location on campus. While this would result in a greater impact than the other alternatives, VA would make every effort to utilize existing space elsewhere such that potential environmental impacts to existing resources would be minimal. The call center facility equipment and staffing needs are minimal and its relocation to another location on campus, as required under Alternative E, is expected to result in less minimal disruption in operation of the call center itself, and in other activities associated with Alternative E.

## **4.16.3 Utilities**

The existing Hot Springs Campus utilities and related infrastructure (e.g., water supply and wastewater capacity) could easily accommodate an increase in approximately 120 employees. The planned decrease in staffing levels projected under Alternatives A-1, A-2, B and D would exceed the number of positions that would be added for the call center, so there would be no added burden to existing utilities and infrastructure. While the number of employees would increase from proposed

levels under Alternatives C and E (and current levels under Alternative F) - all of which include a continued VA presence on the campus (at varying levels), the existing infrastructure would be able to accommodate the net increase in staff with no adverse effects. The campus has operated with a significantly higher number of employees in the past and has the necessary infrastructure in place to accommodate the associated increases in utilities (electrical, water, waste) that would result from an influx of approximately 120 new employees. It would constitute a potential benefit to current wastewater operations.

#### 4.16.4 Socioeconomic Conditions

There could be cumulative impacts to the economy of Fall River County if the schedules of the larger construction projects listed in Table 3.16-1 overlap with construction for the reconfiguration proposal. This would include the expected overlap of the two construction components associated with the proposed reconfiguration itself, which would require new construction or renovation activities in both Hot Springs and Rapid City, especially if the same construction workforce in Pennington County would be likely to be tapped to support construction in both locations as is likely to be the case. In addition, depending on the success and timing of VA's effort to find a new user for the existing Hot Springs Campus, the associated reuse could also require new construction/renovation within an overlapping timeframe that could contribute to potential cumulative impacts in Hot Springs (associated with Alternatives A-1 and A-2 through D). The construction industry could experience potentially large, short-term impacts, especially during peak construction periods when the maximum number of workers would be onsite, if the industry is not able to locate and employ an adequate number of workers with the appropriate skills. The construction workforce for overlapping projects could have a cumulative impact on the demand for local housing and accommodations, particularly during the peak tourist season. Although these cumulative impacts could overlap for the VA facility construction period (estimated to be two to three years), the impacts would be considered short-term and overall beneficial to the local economy. The increase in employment anticipated with Alternative E and possibly Supplemental Alternative G could induce growth in other similar businesses and thus create a further demand on the available labor force. This cumulative impact could be adverse if the induced growth creates competition for the same employment sector needed to successfully implement the reconfiguration or re-use alternatives.

With respect to potential cumulative impacts from facility operation (i.e., staff reduction) under Alternatives A-1 and A-2 through D, Table 4.16-1 shows the change in population and employment between 2010 and 2015 for Hot Springs and Fall River County.

**Table 4.16-1. Change in Population and Employment 2010 to 2015**

	Population		Employment		
	Fall River County	Hot Springs	Fall River County	Hot Springs	FTEEs that work in Hot Springs
2000	7,453	4,129	4,943	1,607	376
2010	7,094	3,711	3,815	1,539	380

	Population		Employment		
	Fall River County	Hot Springs	Fall River County	Hot Springs	FTEEs that work in Hot Springs
2014	6,867	3,532	3,026 [2886]	1,608	357
Total Change 2000-2015	-7.8%	-14.4%	-38.8%	0%	-5% [-9%]

U.S. Census Bureau 2010, 2016; Bureau of Labor Statistics, 2010, 2016

Fall River County has experienced a steady decline in population and employment since 2000; the City of Hot Springs has experienced a steady decline in population but employment levels in 2014 are near where they were in 2000; staffing levels at Hot Springs Campus declined approximately 5 percent since 2000. The significant drop in Fall River County, in particular, is likely due to a number of factors including the great recession of 2008, recent decline in oil and gas industry production, and to some extent the staffing reductions at the Hot Springs Campus. Hot Springs staff comprised approximately 7.6 percent of the total workforce in Fall River County in 2000 (376/4,943); the contribution rose to nearly 12 percent in 2014, although overall employment figures were down for the county compared to 2000 levels. In comparison, Hot Springs employees accounted for nearly 23 percent of the employed workforce in Hot Springs in 2000, and stayed nearly constant at 22 percent in 2014. Since the downward trends in employment in Fall River County are already large, and the Hot Springs employees continue to comprise a moderate to large percentage of the workforce in Fall River County and Hot Springs community in particular, the additional decline in employment and income that would result from the proposed reconfiguration would further the decline. Overall, the cumulative impact to the Fall River County and local Hot Springs community would be potentially significant. This would occur under Alternatives A-1 and A-2 through D.

VA recognizes its value to the community and would make every effort to minimize the impact to the extent possible. For example, VA is committed to finding every current VA employee a job, including any retraining that might be needed for a new assignment. Many may be used to fill openings at the MSOC in Rapid City, although it might result in some employees moving out of Hot Springs. For those Hot Springs FTEEs that could not be transitioned to Rapid City, other options could include eligible retirements, early retirements, buy-outs, and voluntary separations. This could potentially affect a large number of retirement eligible FTEs that live in Fall River County.

The proposed Pharmacy call center would provide approximately an additional 120 new jobs. Staff recruitment is not expected to be a concern given the different skill sets required for the call center jobs, unlike the challenges VA has faced in recruiting medical and clinical staff to operate the Hot Springs Campus. The addition of approximately 120 jobs, in combination with all of the alternatives, has the potential to benefit the local and regional economy and help minimize/offset the loss of jobs under the proposed reconfiguration.

Note that Alternative E would result in an increase in staffing levels which would have an overall beneficial impact on the economy, and Alternative F would result in no change in staffing levels. With the addition of the proposed call center's 120 employees, the staffing levels on the Hot Springs Campus under Alternatives C, E and F (which include a continued onsite VA presence) would increase over current projected levels, with the highest increase expected under Alternative E. This

increase also may be a benefit to the local and regional economies. While it may not be sufficient to fully reverse the past decline the area has been experiencing, which is likely the result of a variety of factors as noted previously, it could result in a noticeable improvement.

Finally, VA would continue to rigorously pursue a campus re-use option as described in Alternative G, to be implemented along side the proposed call center as appropriate, which would help further reduce the socioeconomic impacts if a suitable use is found.

#### **4.16.5      Transportation and Traffic**

There could be possible short-term cumulative impacts to traffic circulation if a site selected for a new VA facility in Hot Springs or Rapid City is near or mainly accessed by a travel route that is undergoing or planned for roadway improvements or reconstruction. The vehicle trips added to the local area by the construction and operation of VA facilities could further increase traffic congestion beyond what the locality would have experienced due to the roadway project alone, in the absence of the VA-related traffic. This cumulative impact would be temporary. A travel route that would serve the site selected for a new VA facility in Rapid City could be the same route that would serve areas planned for residential and commercial development. There could be a cumulative impact if the daily vehicle trips to and from the VA facility would exceed the safe and efficient design function of the travel route planned to serve future development. However, any cumulative impact would not be significant because the traffic projections and long-range planning conducted by the City of Rapid City extend to 2035 (with an update underway to 2040) and include development scenarios similar to the proposed VA facility.

With respect to the new VHA Pharmacy call center, the campus has operated with a significantly higher number of employees in the past and has the necessary infrastructure in place to accommodate the associated increases in traffic that would result from an influx of 120 new employees. The proposed expansion in staff and activities under Alternative E (492 staff), however, in combination with the call center (120 staff, representing an additional 20 percent increase) would greatly increase vehicle trips by employees, patients, visitors, and support/delivery services and workers, which could have an adverse effect on the traffic circulation on the local roadways through Hot Springs and on the campus. Traffic congestion and vehicle queues could increase along the main thoroughfares and at certain intersections during peak morning and evening travel hours, and during the peak tourist season. The capacity of the roadway network in Hot Springs would likely accommodate an increase in vehicle trips; however, certain roadway improvements such as adding turn lanes and intersection signals (traffic light, four-way stop) would minimize adverse traffic impacts. Implementation of any roadway improvements outside the VA campus would be at the discretion of the City of Hot Springs.

The additional vehicle trips could adversely affect the capacity of the roadway network and parking on the campus such that roadway improvements could be necessary to minimize traffic congestion, especially during peak travel hours. Possible improvements could include one-way travel direction, lane striping, and additional parking.

## 4.17 Potential for Generating Substantial Controversy

As discussed in Chapter 6, VA has solicited input from various federal, state, and local government agencies regarding the reconfiguration proposal, and has conducted town halls, scoping meetings, and other outreach regarding the details of this effort. The public and agencies will now have an opportunity to comment on this Draft EIS, with their input incorporated into the Final EIS.

Before the Notice of Intent for this EIS was published, the local community, particularly in Hot Springs, organized against the reconfiguration proposal and developed a detailed alternative, which has been analyzed in this EIS as Alternative E.

As communicated throughout the public participation events and scoping meetings, and re-stated in Section 2.2 of this EIS, Alternatives A through D involve expansion into new facilities in Rapid City while maintaining a presence in Hot Springs. **There was a common misconception during scoping, also appearing in subsequent editorials and social media posts, that expansion in Rapid City meant that all services in Hot Springs would be discontinued. VA has clearly stated, and reiterates in this EIS, that continuation of outpatient primary care services in Hot Springs (either at the current location or a different facility) is and always has been part of every alternative.**

A summary of the public scoping process and the comments received is included in Appendix B, and can also be viewed at the VA BHHCS webpage ([www.blackhills.va.gov/vablackhillsfuture](http://www.blackhills.va.gov/vablackhillsfuture)).

Since the project was first announced, several dozen newspaper articles have been published in local newspapers regarding the reconfiguration proposal.

In summary, VA BHHCS reconfiguration proposal is associated with public controversy. The issues of concern to the public that were identified through the scoping process and that are within the scope of the analysis for this EIS (see Section 1.3) have been evaluated in this impact analysis.



## 4.18 Unavoidable Adverse Impacts

Unavoidable adverse impacts are those that would occur if an alternative was implemented. In many cases, adverse impacts that were identified and evaluated in this chapter are avoidable through following agency policies, procedures, and directives; complying with federal, state, and local requirements; and applying best management practices, including those listed in Chapter 5.

Because site selection for potential new VA facilities (whether new construction, lease, or renovation of an existing non-VA facility) has not occurred, any adverse impact that could occur simply because of a new VA facility being sited in a particular location would be considered avoidable. For example, if a site has endangered species habitat that would be eliminated to construct the VA facilities, the adverse impact to the endangered species can be avoided by selecting a different site. As stated in Section 2.2, VA would follow departmental facility specifications, standards, and guidelines in any site selection, planning, design, and construction for a new CBOC, MSOC, or RRTP. These requirements include those that are available online for public access from the Technical Information Library of VA's Office of Construction & Facilities Management ([www.cfm.va.gov/til/](http://www.cfm.va.gov/til/)).

The following unavoidable adverse impacts have been identified.

**Air Quality:** Construction- or renovation- and operation-related air emissions, within permit limits, would occur under each alternative. These emissions would be mitigated to acceptable levels by compliance with permit limits and regulatory requirements.

**Cultural Resources and Historic Properties:** A change in the character of use that contributes to the historic significance of the Battle Mountain Sanitarium NHL would be an unavoidable adverse impact under Alternatives A, B, and D; and Supplemental Alternative G, unless a use for the facility is identified by another VA entity. Introducing visual or audible elements to the historic setting of the Battle Mountain Sanitarium NHL during construction would be a temporary unavoidable adverse impact under Alternatives A-2, C, E, and F; and Supplemental Alternative G. Introducing new development within the Battle Mountain Sanitarium NHL could diminish the integrity of historic features such as setting or design, which would be an unavoidable adverse impact under Alternatives E and F and Supplemental Alternative G. The measures described in Chapter 5 are designed to avoid or minimize these effects; they were identified with consulting party input; see Chapter 5, Mitigation, Monitoring, Minimization, and Best Practices.

**Noise:** Construction- and renovation-related noise and vibration impacts would occur to varying degrees under each alternative, as would ongoing minor noise from operations. The intensity of noise impacts would depend on locations compared to receptors, and would be mitigated by daytime scheduling of construction activities and shielding where appropriate.

**Socioeconomics:** The reduction in FTEEs and wages would be an unavoidable adverse impact to some local economies of the VA BHHCS service area.

**Solid Waste and Hazardous Materials, Utilities:** Construction and renovation would generate solid waste and, for renovation of older facilities, specialty wastes (asbestos-containing materials, lead-based paint). Solid, medical, and hazardous waste would be generated by operation of facilities. Energy (electricity, propane, natural gas, fuel oil) and water would be consumed during construction

and operation. VA BHHCS would continue to comply with VA's Waste Prevention and Recycling Program, strategic sustainability performance plan (update in progress in accordance with Executive Order 13693), Sustainability Management Policy, and related agency guidance to minimize waste generation and improve energy and resource efficiency.

**Transportation and Traffic:** Construction vehicles and haul trucks traveling on roadways and accessing the construction site could have short-term unavoidable impacts to other motorists.

## 4.19 Relationship between Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity

CEQ's NEPA regulations (40 CFR 1502.16) require consideration of the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity. This involves considering whether an alternative would sacrifice a resource value that might benefit the environment in the long-term for some short-term value to the government or the public. In this analysis, short-term refers to a time span of approximately five years, including continued uses that would not change and the construction and initial operation of any new facilities. Long-term refers to VA's ongoing operation of existing or new facilities for as long as the location is operated by VA and all time thereafter.

Short-term uses are generally those that determine the present quality of life for the public, including Veterans utilizing VA health care services, VA BHHCS employees, and the local community. The current use of the Hot Springs Campus and Rapid City CBOC is that of facilities providing health care services to Veterans and their families. The short-term uses of the environment associated with implementing any of the alternatives would be those typical of operating a medical hospital or clinic or residential facility. Table 4.19-1 summarizes the current use of each existing and potential facility location, and how that use would change under each alternative.

**Table 4.19-1. Existing and Future Uses.**

Location / Facility and Existing Use	Change to Use, by Alternative							G (supplemental)
	A-1	A-2	B	C	D	E	F	
Hot Springs Campus: VA health care	No VA health care	VA health care (CBOC only)	No VA health care	Decreased intensity	No VA health care	Increased intensity	No change	Unknown
New Hot Springs CBOC (+RRTP): current use unknown (location not selected)	VA health care (CBOC only)	NA	VA health care	NA	VA health care	NA	No change	NA
Rapid City CBOC: VA health care	No VA health care	No VA health care	No VA health care	No VA health care	Non-VA	VA health care	No change	NA
New Rapid City MSOC (+RRTP): current use unknown (location not selected)	VA health care	VA health care	VA health care (MSOC only)	VA health care (MSOC only)	VA health care	VA health care (MSOC only)	No change	NA

NA = not applicable.

Long-term productivity for a medical facility refers to its capability to support and improve the health of patients seeking care, which is a component of the human environment. Alternatives A through E would improve one or more aspects of the long-term productivity of the VA BHHCS medical facilities in Hot Springs and Rapid City by increasing access, improving service locations compared to patient populations, or increasing levels of service in one of the cities. The clear goal of VA's proposal to reconfigure VA BHHCS health care services is to maintain and enhance the long-term productivity (capacity to provide health care for Veterans) of its facilities.

With the exceptions of economic conditions in the City of Hot Springs, land selected for new construction, and construction waste generation, no measurable difference in the current level of impact to long-term productivity of the human or natural environment is expected, regardless of changes that may be made in the location and levels of activities at VA facilities in Hot Springs and Rapid City:

- Alternatives that decrease VA's operations in Hot Springs (A, B, C, D; whether at the existing campus or elsewhere) would also decrease the VA-related input to the local economy, including local employment, purchase of goods and services by VA, and utilization of local businesses by employees and patients. However, under Alternatives A, B, C, and D, the existing Hot Springs campus would be made partially or fully available for re-use, with associated input to the Hot Springs economy that would partially, fully, or more than offset the decrease in VA-related local economic input. Thus, Alternatives A through D's impact on the long-term productivity of economic conditions in Hot Springs may be a decrease, little change, or an enhancement, depending on the concurrent implementation of Supplemental Alternative G and the features of the specific re-use plan.
- Construction being considered by VA BHHCS under Alternatives A, B, C, and D could result in disturbance, use, and long-term decreased productivity of relatively small amounts of previously undisturbed land. The potential locations in Hot Springs and Rapid City for a new CBOC, RRTP(s), and MSOC have not been identified but are expected to be within city limits, with a zoned land use that would accommodate, or that the respective city would be willing to revise to accommodate, a VA health care services facility. Location selection and facility design would consider and seek to minimize any potential for impacts to the environmental values and characteristics of the natural and human environment.
- Ongoing management of sanitary solid waste and medical waste generated by existing or new locations would continue to require the use of energy and space at local or regional disposal facilities. Construction debris would similarly require appropriate disposal. Land used for waste management requires a permanent commitment of terrestrial resources, preventing its long-term environmental productivity. A VA health care facility would not constitute a novel waste source nor generate more than a minor or negligible portion of the volume of the waste handled by a facility; thus, it would have a similarly minor or negligible contribution to the lack of long-term productivity of the land used for disposal. Adequate landfill capacity has already been developed in the area to accommodate any construction waste associated with the alternatives, and thus would also have a minor or negligible contribution to the lack of long-term productivity of the land used for its disposal.

## **4.20 Irreversible or Irretrievable Commitments of Resources**

The CEQ NEPA regulations (40 CFR 1502.16) require an analysis of irreversible and irretrievable commitments of resources, such as the use or consumption of a resource that is neither renewable nor recoverable, or the unavoidable destruction of environmental resources. Irreversible and irretrievable commitments of resources from the VA BHHCS alternatives include fossil fuel-based energy consumption and use of nonrenewable materials for construction and operation. Construction, operation, and transportation would mainly rely on fossil fuel-based energy to run construction equipment; supply heat, air conditioning, and electricity for operation of the medical facilities; and power private, public, and volunteer transportation of patients to and from the facilities. Energy would be consumed in the form of gas- and oil-generated electricity, fuel oil, natural gas, propane, gasoline, and diesel fuel. Materials from nonrenewable sources used for construction and operation include those produced from mined materials (such as metals) or petroleum-based plastics, polymers, and other materials.

In compliance with Executive Order 13693, VA's pending update to its strategic sustainability performance plan will, in part, identify approaches for reducing energy use and cost, finding renewable or alternative energy solutions, and using recycled and sustainably produced materials. The provisions of the updated plan will be applied agency-wide, including during implementation of the selected alternative from this EIS process, reducing the irreversible and irretrievable commitment of resources.

## 5.0 MITIGATION, MONITORING, MINIMIZATION, AND BEST PRACTICES

The Council on Environmental Quality (CEQ) *National Environmental Policy Act* (NEPA) regulations (40 Code of Federal Regulations [CFR] 1508.20) state that mitigation includes:

- Avoiding the impact altogether by not taking a certain action or parts of an action
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action
- Compensating for the impact by replacing or providing substitute resources or environments

Mitigation is a term that refers to measures that resolve adverse effects to historic properties identified through the integrated *National Historic Preservation Act* (NHPA) Section 106 consultation process; see Section 5.2.

The measures and best practices identified in this environmental impact statement (EIS) include measures that are incorporated into an alternative; compliance with federal, state, and local regulatory requirements; best management practices incorporated into an alternative; and additional VA-proposed protective measures. The record of decision (ROD) for an EIS binds an agency to implement specific mitigation commitments stated in the ROD. In addition, compliance with regulatory requirements is enforced by the respective regulatory agency. For example, compliance with air quality regulations would be enforced by the South Dakota Department of Environment and Natural Resources. Where relevant for a particular alternative, the following mitigation, monitoring, minimization, and best practices can reduce the adverse impacts that were identified in Chapter 4.

If the characteristics of the proposed site(s) for a new facility in either Hot Springs or Rapid City could be associated with potential environmental impacts not evaluated in this EIS, additional NEPA review would be undertaken and would incorporate the measures described in this chapter.

### 5.1 Resources other than Cultural Resources

#### 5.1.1 Aesthetics

Any security lighting used during construction would be directed downward to minimize light trespass onto adjacent property and land uses.

VA would consult with local officials and consider recommendations on setbacks, landscaping, lighting, and aesthetic qualities of buildings in accordance with 40 United States Code 619(c) and (d).



## 5.1.2 Air

The U.S. Department of Veterans Affairs (VA) Black Hills Health Care System (VA BHHCS) would comply with the South Dakota Natural Events Action Plan; and Pennington County Ordinance 12, and Rapid City Code of Ordinance 8.34, both of which are titled *Fugitive Emissions and the Abatement of Smoke*, where applicable. The Natural Events Action Plan applies to the west Rapid City area and requires, in part, voluntary cessation of construction or use of control measures during high wind dust alerts.

Pennington County Ordinance 12 and Rapid City Code of Ordinance 8.34 also identify reasonably available control technology requirements for minimizing fugitive dust during construction activities, including but not limited to:

- Wetting down
- Chemical stabilization
- Applying dust palliative
- Minimization of area disturbed
- Reclamation of disturbed area as soon as possible
- Vehicular speed limitation
- Cleaning of paved areas

New construction would comply with the *VA Design Guide for Mental Health Facilities*, in which the U.S. Green Building Council Leadership in Energy and Environmental Design Project Certification is a recommended standard. The following codes and standards would be followed for new construction at a minimum:

- *Energy Policy Act of 2005*
- Energy Efficiency Standards and Energy Code for New Federal Commercial and Multi-Family Residential Buildings (10 CFR Parts 433, 434 and 435)
- The 16-agency (including VA) memorandum of understanding committing to design, construct, and operate their facilities in an energy-efficient and sustainable manner (Federal Leadership in High Performance and Sustainable Buildings)
- Executive Order 13423, *Strengthening Federal Environmental, Energy, Transportation Management*
- Executive Order 13148, *Greening the Government through Leadership in Environmental Management*
- VA's strategic sustainability performance plan (in preparation), which will specify agency plans and procedures for complying with Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*. This order states, in part, that federal agencies should propose greenhouse gas emission reduction targets and decrease fleet inventories and mobile source greenhouse gas emissions.

## 5.1.3 Geology and Soils

Construction- and operation-related geology and soils impacts, including erosion and sedimentation impacts, would be minimized through implementation of the following:

- Design, install, and maintain erosion and sediment controls during the duration of construction activities and any subsequent soil disturbance activities near site drainages. Such controls may include silt fences, runoff control berms, erosion control fabric, and rip-rap.
- Minimize the amount of exposed soils at any given time during construction activities. Quickly revegetate disturbed areas following completion of activities.
- Minimize the disturbance of steep slopes.
- Provide an undisturbed natural buffer between the activity area and surface drainages, and direct stormwater runoff to vegetated areas.
- Develop a stormwater pollution prevention plan, consistent with the requirements of the National Pollutant Discharge Elimination System general permit.
- Implement spill and leak prevention and response procedures.
- Use appropriate dust control methods during construction activities. Dust control methods include water sprays, chemical soil additives, and wheel washers.
- Suspend construction activities during periods of high winds.

#### **5.1.4 Hydrology and Water Quality**

Construction- and operation-related hydrology and water quality impacts, including erosion and sedimentation impacts, would be minimized through implementation of the best management practices listed above for Geology and Soils. Additional impacts would be minimized through implementation of the following:

- Design new facilities to minimize the area of impervious surfaces.
- Route stormwater runoff from impervious surfaces to stormwater retention and drainage areas.
- Implement spill and leak prevention and response procedures, including maintaining a complete spill kit at the project area, to reduce the impacts of incidental releases of vehicle fluids.
- Design onsite construction staging areas to minimize stormwater runoff from these areas directly to drainages.

#### **5.1.5 Wildlife and Habitat**

During site selection for new construction, review potential locations for the presence of sensitive ecological resources and protected species and include a preference to avoid such locations.

Prior to construction, survey the proposed site for nests of migratory birds in accordance with the *Migratory Bird Treaty Act*.

For construction on greenfield sites, make efforts to preserve existing natural features and significant vegetation and avoid impacts to sensitive resources as part of the site selection process, consistent with VA siting guidelines, including:

- Preserve and conserve natural features and significant vegetation, especially trees and shrubs (including sensitive habitat), for environmental protection (reduce maintenance and enhance sustainability).
- Preserve existing trees, forests, wetlands and landscape features that are important resources and visual assets; site analysis and planting design would identify, retain and protect mature trees and vegetation, whenever reasonably possible.
- Minimize site disturbance and modification to natural topography.
- Concentrate development in areas with minimal non-engineered slopes and existing infrastructure.
- Mitigate any construction disturbance.
- Minimize creation of impervious surfaces.
- Maximize use of existing drainage patterns and features.
- Use required buffers/setbacks to restrict access if any wetlands or protected waterways are on the site; all wetlands and waterways on federal lands must be identified and protected throughout the site design and construction process and after the project is finished.

Protect aquatic species habitat by implementing best management practices and conforming to National Pollutant Discharge Elimination System permit requirements (see measures listed for Geology and Soils and for Hydrology and Water Quality, above).

Conduct pre-construction surveys and coordination/consultation with the U.S. Fish and Wildlife Service and the South Dakota Department of Fish and Game, as appropriate, to ensure that impacts on any sensitive animal and plant species in the vicinity of the selected site are negligible and that appropriate mitigation actions are implemented. Mitigation measures would include site development plans that avoid disturbing species or habitat, timing activities to avoid critical timeframes such as breeding season, or relocating sensitive species away from areas likely to be disturbed. Regulatory agencies would be consulted in developing and applying appropriate mitigation.

### 5.1.6 Noise

Construction- and operation-related noise impacts would be minimized through implementation of the following:

- Limit outdoor construction activities using heavy equipment to daylight hours.
- Properly maintain and muffle equipment such that the equipment sound levels specified in the VA Master Construction Specifications, *Temporary Environmental Controls* are not exceeded.
- Monitor area noise levels at least once every five days during high noise generating activities.
- Maintain sound shielding around the project site during high noise generating activities.
- Minimize equipment idling, and shut down construction equipment when not in use.
- Design new facilities and renovated facilities to utilize berms, tree lines, and vegetative buffers for additional sound shielding of operational activities.

- Upon determining the location of new facilities, conduct a survey of the preexisting condition of neighboring facilities and receptors for both potential noise and vibration impacts. Consider site-specific impact minimization actions.

### 5.1.7 Land Use

VA BHHCS would notify and coordinate with property owners adjacent to the selected sites for a community-based outpatient clinic, multi-specialty outpatient clinic, and residential rehabilitation treatment program to minimize disturbance to land uses during construction. Construction would occur during daytime hours to minimize disruption to residential areas. Construction would not block ingress/egress to adjacent businesses during their business hours of operation.

If the campus is transferred out of federal ownership, VA BHHCS would require the re-use proponent to coordinate with the City of Hot Springs to ensure compliance with the city's current land use plan and zoning, or would become compliant through a waiver or revision to the plan or zoning. VA BHHCS would also ensure a transfer agreement is developed in accordance with NHPA consultation requirements and that it includes conditions and restrictions to ensure the prospective landowner would maintain the integrity of the National Historic Landmark status of the site.

### 5.1.8 Floodplains and Wetlands

VA BHHCS would conduct field surveys to identify and determine the jurisdiction of any wetlands as part of the site selection process.

Site design would avoid jurisdictional (regulated) wetlands to the extent practicable. If jurisdictional (regulated) wetlands cannot be avoided, VA BHHCS would develop a mitigation plan to compensate for the lost function and value of wetlands either by creating or enhancing other wetlands onsite or at an offsite location through an established mitigation bank, or through an in-lieu fee program.

### 5.1.9 Socioeconomics

The impacts to employment associated with the reduction in the number of full-time equivalent employees needed to operate VA facilities would be minimized through VA retraining efforts, if needed, to provide every employee with the option for placement in another VA where possible, eligible retirements and offers for voluntary early retirements, buy-outs, re-training, and transfers to other positions within the VA BHHCS service area.

Alternative E would not be expected to strain the capacity of Fall River County to absorb the 3.5 percent increase of employees proposed to implement this alternative. VA BHHCS would coordinate with the City of Hot Springs, Fall River County, and Save the VA organization in the community's planning for the anticipated increased demands on housing and infrastructure as needed.

## 5.1.10 Community Services

VA BHHCS would update support agreements with local law enforcement agencies to reflect the change in VA police presence and security patrols for VA facilities in Hot Springs and Rapid City.

VA BHHCS police would monitor for increases in incidents due to the unoccupied Hot Springs Campus that require police response, and respond accordingly to protect VA facilities, such as by increasing the frequency of patrols by VA police.

VA BHHCS would require the general contractor(s) to manage accident, fire, and security risks such that requests for emergency response by medical, fire, or police would not exceed the capacity of these providers in Hot Springs or Rapid City. This would be accomplished by ensuring the general contractor(s) follow VA Construction Specification Section 01-35-26 “Safety Requirements” and prepare and implement an accident prevention plan and fire safety plan; and follow Section 01-00-00 “General Requirements, Construction Security” and prepare a plan to secure the construction site.

## 5.1.11 Solid Waste and Hazardous Materials

Construction- and operation-related solid waste and hazardous materials impacts would be minimized through implementation of the following:

- Conduct proper vehicle maintenance and inspection to reduce the potential for incidental releases of vehicle fluids.
- Maximize reuse and recycling of wastes to minimize quantities destined for disposal. Conduct facility renovation/demolition such that valuable facility components may be reused or recycled.

## 5.1.12 Transportation and Traffic

VA BHHCS would coordinate with the Hot Springs Engineering Department and the Rapid City Public Works Department to address transportation-related requirements during the site selection process for new facilities.

VA BHHCS would prepare traffic control plans in coordination with the Hot Springs Engineering Department and the Rapid City Public Works Department to address construction-related road closures, detours, and haul truck routes to minimize disruption to traffic flow, maintain access to any businesses and residential areas near the construction sites, and provide safe passage for pedestrians and bicyclists.

VA BHHCS would coordinate with the Hot Springs Engineering Department and Rapid City Public Works Department on any requirements to complete a traffic study for the selected site(s) for new facilities, and incorporate appropriate roadway improvements into a site design. Improvements to minimize adverse traffic impacts at a site could include roadway resurfacing, drainage (curb and gutter), accessible sidewalks, crosswalks, turn lanes, bicycle lanes, intersection signalization (traffic light, four-way stop), and bus turn-outs.

VA BHHCS would coordinate with the Rapid Transit System to encourage the expansion of bus service to accommodate any projected increase in ridership, including the extension of bus route(s), additional bus stop(s), and shelter(s) at new facilities in Rapid City.

If the campus is transferred out of federal ownership, VA BHHCS would require the re-use proponent to coordinate with the Hot Springs Engineering Department to ensure the re-use plan complies with the city's transportation planning goals. VA BHHCS would also ensure a transfer agreement is developed in accordance with NHPA consultation requirements and that it includes conditions and restrictions to ensure the prospective landowner would maintain the integrity of the National Historic Landmark status of the site, including the road network, which is a contributing resource to the landmark.

### **5.1.13 Utilities**

Construction- and operation-related utilities impacts would be minimized through implementation of the following:

- Consider use of renewable energy generation and energy/water conservation measures in the design of new and renovated facilities.
- Utilize native vegetation and drought-resistant vegetation for area landscaping to reduce irrigation requirements.
- Potential adverse impacts to the Hot Springs wastewater treatment plant resulting from reduced inflows due to operational changes at the campus could be mitigated through operational agreements between the City of Hot Springs and VA where some of VA's unused water rights are discharged to the city's wastewater treatment plant rather than discharged under the VA's NPDES permit. Such agreements do not presently exist.

### **5.1.14 Environmental Justice**

Implementation of the mitigation measures for all environmental impacts identified in the paragraphs above would also ensure that environmental justice impacts would be negligible. Neither of the communities affected by facility construction or renovation have disproportionately high minority or low income populations.



## 5.2 Resolution of Adverse Cultural Resources Effects

### 5.2.1 Guidance

Adverse effects to historic properties can be resolved by measures that VA BHHCS would take to avoid, minimize, or mitigate such effects. Regulations, directives, policies, standards, and guidelines of VA, the Advisory Council on Historic Preservation, and National Park Service (NPS) provide the basis for identifying and developing measures to resolve adverse effects to historic properties, including those presented in the following sections.

#### 5.2.1.1 *Standards and Guidelines for Treatment of Historic Properties*

The Secretary of the Interior's Standards for the Treatment of Historic Properties are a series of concepts about maintaining, repairing, and replacing historic materials, as well as designing new additions or making alterations to historic properties (NPS 1995). The Standards are presented by the four treatment approaches of preservation, rehabilitation, restoration, and reconstruction. The associated *Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings* offer general design and technical recommendations to assist in applying the standards to a specific property (NPS 1995). Together, the Standards and Guidelines provide a framework for decision-making about changes to a historic property. For the VA BHHCS reconfiguration alternatives, both the Standards and Guidelines would be advisory, not regulatory.

Rehabilitation treatment is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features that convey the property's historical, cultural, or architectural values (NPS 1995). The 10 standards for rehabilitation acknowledge the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character and would be the treatment most applicable to the VA BHHCS reconfiguration alternatives. The rehabilitation treatment standards (NPS 1995) are as follows:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

### **5.2.1.2 Long-Term Preservation of Buildings**

The process of closing up (shuttering) a building temporarily to protect it from the weather and secure it from vandalism while planning for future re-use is referred to as mothballing. NPS Preservation Brief 31 provides guidance on protecting historic buildings for up to 10 years, depending on continued monitoring and maintenance (NPS 1993). NPS Preservation Brief 31 identifies the following nine steps in properly mothballing a building:

- Documentation:
  - Document the architectural and historical significance of the building.
  - Prepare a condition assessment of the building.
- Stabilization:
  - Structurally stabilize the building, based on a professional condition assessment.
  - Exterminate or control pests, including termites and rodents.
  - Protect the exterior from moisture penetration.
- Mothballing:
  - Secure the building and its component features to reduce vandalism or break-ins.
  - Provide adequate ventilation to the interior.
  - Secure or modify utilities and mechanical systems.
  - Develop and implement a maintenance and monitoring plan for protection.

In the event that any historic building on the Hot Springs Campus was to be unoccupied for a period of at least three months, VA would develop a comprehensive plan for the long-term preservation of such buildings. This plan would incorporate and improve on the standards outlined in NPS Preservation Brief 31, Mothballing Historic Buildings and improve on them by making them specific to the Hot Springs Campus. Section 5.2.2 provides additional detail on the specific steps VA would take as part of the long-term preservation plan.

### **5.2.1.3 Managing Underutilized Real Property**

VA Directive 7633 and associated Handbook 7633 address methods, policies, and options for managing underutilized real property (buildings and land) (VA 2006a, 2006b). Options for managing underutilized property are considered in the order of priority listed below:

- Offer underutilized property to other VA entities and federal agencies.
- Enhanced-use leasing to a public, private, or non-profit sector for up to 75 years for VA or non-VA use consistent with the mission of VA.
- Sharing, license, outlease, permit, or easement to a public, private, or non-profit sector for VA or non-VA use for three- to five- year timeframes.
- Transfer to non-VA entity, including a federal or state agency, Indian tribe, or public or private entity, depending on the suitability and availability of the property for use by a homeless assistance group.
- Like-kind exchange of property.
- Disposal through the General Services Administration.
- Mothballing, demolition, or deconstruction.

Any transfer or disposal of real property must comply with NEPA and the NHPA. VA may also enter into a partnership or agreement with public or private entities dedicated to historic preservation to facilitate a transfer of properties listed in the National Register of Historic Places (VA 2006b). If demolition or deconstruction were to take place, additional consultation would take place.

## **5.2.2 Measures to Avoid, Minimize, or Mitigate Adverse Effects**

Following publication of the draft EIS, VA BHHCS continued consultation with historic properties consulting parties to discuss adverse effects of the proposed alternatives, including Alternative A-2, and measures to resolve the adverse effects of these alternatives. VA drafted some potential measures to resolve adverse effects; other suggested resolutions were developed by the historic properties consulting parties. These measures were discussed in meetings dated January 21, 2016, and February 17, 2016. VA produced draft measures for consulting party review on April 13, 2016. Consulting parties were asked to provide comments and suggestions on the revised measures by April 28, 2016. VA reviewed the comments, and released revised measures for consideration on May 18, 2016. Historic property consulting parties were asked to provide final comments by June 20, 2016. VA further revised the measures to resolve adverse effects in response to comments provided by consulting parties, notably the South Dakota SHPO.

The measures to resolve adverse effects take into account the level of effect of the proposed alternatives. Alternatives that include vacation of the VA Hot Springs Campus, in whole or in part, result in a greater adverse effect to the historic property and therefore carry more measures to resolve the effect. Resolution of the effect does not necessarily mean avoidance. NHPA also allows for federal agencies to consider measures that minimize the effect. Federal agencies also may mitigate the effects. The measures to avoid, minimize, or mitigate adverse effects to historic properties that VA BHHCS will commit to implementing will be documented in the ROD (36 CFR 800.8(c)(4)(i)(A)).

No matter which alternative is selected, VA will commit to certain measures in the ROD. These measures include:

- VA shall provide written reports via email to all consulting parties about the implementation of measures to resolve adverse effects to historic properties every six months from the date of execution of this ROD until all measures have been enacted or for at least ten years. These semi-annual reports will be posted to the consultation website that is already in place for this project.
- VA shall host annual meetings with historic property consulting parties to update them about the implementation of measures to resolve adverse effects to historic properties. These meetings will continue for at least 5 years.
- Within 120 days of issuing the ROD, VA shall develop and email a timeline of major milestones with deadlines for implementing each measure to all consulting parties.
- Historic preservation measures, including architectural design, carried out pursuant to this undertaking shall meet the Secretary of the Interior's (SOI's) Standards for Archaeology and Historic Preservation ([www.nps.gov/history/local-law/arch\\_stnds\\_0.htm](http://www.nps.gov/history/local-law/arch_stnds_0.htm)), taking into account the suggested approaches to exterior rehabilitation and new construction in the SOI's Standards for Treatment of Historic Properties. New construction off the VA Hot Springs campus, will require additional consultation pursuant to 36 CFR § 800.
- VA shall ensure that all historic preservation mitigation measures carried out pursuant to the Reconfiguration shall be done by or under the direct supervision of historic preservation professionals who meet the SOI's Professional Qualifications Standards ([www.nps.gov/history/local-law/arch\\_stnds\\_9.htm](http://www.nps.gov/history/local-law/arch_stnds_9.htm)). VA shall ensure that consultants retained for services pursuant to this ROD meet these standards.
- VA shall not re-number or otherwise change the existing campus building numbers. New construction shall not copy any extant or past building numbers.
- VA shall assign a Dedicated Project Manager (DPM) at the Network level or higher within the VA to coordinate, monitor, and report on progress implementing the historic preservation mitigation measures outlined in this ROD. This individual will have at least three years of project management experience and be experienced in the treatment of historic buildings or districts. This individual will serve as the direct point of contact with consulting parties and the public for matters related to preservation mitigation.
  - Preference shall be given to an individual who meets the SOI standards in Architecture or Architectural History.

The ROD is subject to the *Anti-Deficiency Act* (31 U.S.C. Section 1341). VA's responsibilities to implement these measures are contingent upon the availability of appropriated funds from which payment, if any, can be made. Should funds not be available to allow VA to meet its responsibilities, VA shall resume consultation to resolve unfunded measures pursuant to 36 CFR §800.4 through §800.7, as applicable.

A full listing of all measures to resolve adverse effects to historic properties, including administrative clauses, is included in Appendix C.

### **5.2.2.1      *Alternative A-1***

Under Alternative A-1, VA BHHCS would build a new CBOC at a location in Hot Springs off of the VA Hot Springs Campus. VA BHHCS also would renovate existing space for or construct a new MSOC and a new RRTP in Rapid City. The MSOC and RRTP may be co-located. The site or sites of the Rapid City facilities is unknown at this time. If selected, Alternative A-1 would result in direct adverse effects to the Battle Mountain Sanitarium NHL and the Hot Springs Historic District due to change in use that would diminish the setting, feeling, and association of the historic properties. This alternative does not result in adaptive reuse of the campus; potential redevelopment is addressed through Supplemental Alternative G.

To resolve adverse effects associated with Alternative A-1, VA has committed to the following measures:

#### ***Measures to Avoid or Minimize Adverse Effects, including Potential Future Effects***

- VA shall follow the tenets of the NHPA and its implementing regulations at 36 CFR §800 to select a site and prepare that site for any construction not contained within the boundaries of the Hot Springs Campus.
- If any historic building on the Hot Springs Campus shall be unoccupied for a period of at least three months, VA shall develop a comprehensive plan for the long-term preservation of such buildings.
  - VA shall hire an SOI-qualified historic architect with experience in mothballing plans to design and oversee this comprehensive plan. This plan will be in keeping with the standards outlined in NPS Preservation Brief 31, Mothballing Historic Buildings.
    - Preference will be given to an individual or team that has experience developing plans for the preservation of multiple unoccupied historic buildings.
  - This plan shall address any stabilization issues and include a schedule of preservation and inspection, full system monitors, onsite security, emergency repairs such as for damage from a fire or roof collapse, a plan for building interiors, a plan for the campus landscape, and annual consultation with the South Dakota SHPO and the NPS.
  - VA shall provide a draft of the plan to the consulting parties for a 30-day review and comment period, highlighting any deviations from the recommendations in Preservation Brief 31.
    - VA shall take into account the comments from the South Dakota SHPO and NPS when finalizing the plan.
    - VA shall forward a copy of the final plan to the South Dakota SHPO and NPS.
  - This plan will make explicit reference to other federal agency experiences with preserving historic buildings in an unoccupied state, as well as specific experiences with maintaining historic buildings in South Dakota and similar climates.
  - The plan will include annual inspections, which will be open to the South Dakota SHPO and the NPS and recorded in reports to the consulting parties.

- VA recognizes the importance of fully funding a comprehensive program for the maintenance of unoccupied historic buildings. VA also recognizes the extraordinary cost of preserving large historic campuses and acknowledges that such cost is not easily absorbed in an annual maintenance budget. VA will include costs for non-recurring maintenance and repair of the unoccupied buildings, in VA's annual Strategic Capital Investment Plan (SCIP) ten-year planning process, with emphasis on the priority of such non-recurring maintenance and repair given by BHHCS and VISN 23. VA shall seek funding at least annually for recurring maintenance and repair of the unoccupied buildings. VA shall include in its required six month written reports to all consulting parties, the results of any and all of VA's efforts to seek such funding.
- The plan shall include annual inspections, which will be open to the South Dakota State Historic Preservation Office and the NPS, and recorded in reports to the consulting parties.
- Once the majority of Buildings 1, 2, 5, 6, 7, 8, 9, 10 and 11 of the campus have closed, preservation of the campus according to the tenets of the comprehensive plan shall continue for a minimum of five years.
- After these five years, VA, in consultation with ACHP, NPS, State Historic Preservation Office, and the Town of Hot Springs, may elect to renew the comprehensive plan for a period not to exceed five additional years. If VA elects to renew the comprehensive plan, this plan must be updated by an SOI-qualified historic architect, to account for extant conditions.
- If, after either five (if VA does not renew the comprehensive plan) or ten (if VA renews the comprehensive plan) years, VA elects not to renew the comprehensive plan for the preservation of historic buildings, VA shall re-engage in consultation with respect to the VA Hot Springs campus, following the tenets of the NHPA and its implementing regulations at 36 CFR §800. This process must be initiated prior to the end of the comprehensive preservation plan implementation.
- The DPM shall work with the VHA Historian, the Hot Springs Historic Preservation Commission, the South Dakota State Museum, and the South Dakota State Archives to find a suitable display location for VA-owned materials currently in the Battle Mountain Sanitarium Museum.
  - VA may loan commemorative materials in accordance with federal law and VA protocols.
  - VA is not obligated to care for materials owned by other agencies or private citizens currently on display in the Battle Mountain Sanitarium Museum.
  - Neither VA nor the Hot Springs Historic Preservation Commission will be monetarily obligated to fund a new display.
  - If an appropriate site cannot be found within the Town of Hot Springs, VA may look at other VA sites or pursue an agreement with the South Dakota State Museum or State Archives.



### *Measures to Mitigate Adverse Effects*

- Following publication of the ROD, and until portions of the Hot Springs campus are transferred to another entity or the campus buildings are preserved in accordance with the comprehensive preservation plan, VA shall make available to a local group or organization the greenhouse, so that group may determine if it is feasible to reactivate, operate and maintain it, and to use it to grow vegetation for the campus or town landscape.
- VA shall seek to develop a programmatic agreement for routine maintenance of the historic Ft. Meade and Sioux Falls VA-owned facilities in consultation with the South Dakota State Historic Preservation Office and the ACHP.
- VA shall support the Hot Springs Historic Preservation Commission to complete an application for the Preserve America program for the town of Hot Springs.
  - This support may include, but is not limited to, technical assistance, staff support, shipping fees, copy fees, and photography.
- VA shall host an annual reunion for patients, staff, and other community residents to commemorate the history of the Battle Mountain Sanitarium and celebrate the service of the residents of Hot Springs to our nation and our nation's Veterans.
  - During this reunion, VA shall establish an oral history booth/tent so participants may record oral histories.
    - VA shall utilize a qualified historian to oversee development of the oral history program.
    - VA, in coordination with the Hot Springs Historic Preservation Commission and other interested consulting parties, shall develop a plan to annually record oral histories of patients, Veterans, staff members, and community residents related to the history of the Battle Mountain Sanitarium and the spirit of service in the Hot Springs area.
    - VA shall solicit assistance from the local schools to develop questions and transcribe all recorded histories.
    - VA shall archive at least one copy of the digital oral histories and the transcripts at the South Dakota State Archives and one copy with a publically-accessible archive in Hot Springs.
    - VA shall host this annual event for at least five years following publication of this ROD. VA will host the annual event within the boundaries of Hot Springs.
    - During the annual reunion, VA will host an annual meeting with historic property consulting parties to update them about the implementation of measures to resolve adverse effects to historic properties. These meetings will continue for at least 5 years.

- Within applicable laws and regulations, VA shall produce or contract for the production of, a book about the historical significance of the Battle Mountain Sanitarium/VA Hot Springs campus, the Hot Springs Historic District, and the spirit of service to country in Hot Springs.
  - This book shall be authored by a professional writer with experience writing commemorative history books; it shall not exceed 300 pages. This book shall contain photos of the Battle Mountain Sanitarium prior to implementing any mothballing plan. At least one chapter of the book will be devoted to the National Homes for Disabled Volunteer Soldiers. This book shall include information gathered from the oral history project established at the annual Battle Mountain Sanitarium/VA Hot Springs reunions.
  - VA shall provide the consulting parties an opportunity to review and comment on the book outline and text. The consulting parties may provide documentation of the Battle Mountain Sanitarium at their discretion to support VA in development of the book.
  - VA shall develop an e-reader version of the book, and make it available commercially
  - VA shall produce or contract for the production of not less than 250 copies and not more than 2,500 copies of the book. Any profits realized by the sale of this book will be managed in accordance with applicable laws and regulations.
- VA shall create a photographic display related to the history of the Battle Mountain Sanitarium and the importance of the mineral springs in Hot Springs in a public area of Building 12 or any new construction associated with this Alternative.
  - This photographic display is intended to be a documentation of Battle Mountain Sanitarium through the years, and shall include at least three photographs of the Battle Mountain Sanitarium prior to executing this ROD. There is no limit on the number of historical photos that may be included in this display.
    - VA shall accept photograph recommendations from the South Dakota State Historic Preservation Office and the NPS, as well as other consulting parties.
    - All photographs shall be fully labeled, cited, dated, and archivally stable to allow for VA scanning.
- VA shall develop a mobile application (“app”) to memorialize the Battle Mountain Sanitarium.
  - This app will include historic photos of the campus, oral histories, and historic context related to the Battle Mountain Sanitarium. VA shall reference the design and purpose of the app designed for the Clement J. Zablocki Veterans Affairs Medical Center (Milwaukee VAMC)/Northwestern Branch of the National Home for Disabled Volunteer Soldiers.
  - This app will be made available to the public, free of charge (excluding personal user fees as charged by the user’s service provider), prior to VA closing the majority of Buildings 1-11 of the Battle Mountain Sanitarium campus and remain available for a period not less than three years.

- The app platform compatibility will be determined at the time of development based on current industry standards.
- Once completed, no updates to the app will be planned.
- VA shall support the Hot Springs Historic Preservation Commission in an effort to complete a re-survey of the Hot Springs Historic District and submit an amendment to the NRHP nomination to the South Dakota State Historic Preservation Office for consideration.
  - This support may include, but is not limited to, hiring an SOI-qualified historic preservation consultant, advertising for volunteer photographers, and printing/shipping costs. VA shall not provide more than \$10,000 in monetary or in-kind support.
  - VA shall allow the Hot Springs Historic Preservation Commission to submit photographs of the VA BHHCS Hot Springs Campus for inclusion in the amended NRHP nomination. The Hot Springs Historic Preservation Commission shall request access not less than 14 days prior to the intended survey. VA BHHCS staff will accompany the photographer to ensure all patient privacy requirements are met.
- VA shall support the South Dakota SHPO by reimbursing the cost of one staff position to recreate the South Dakota Main Street Program.
  - VA and the South Dakota SHPO shall collaborate to select a qualified candidate for the position.
  - VA shall provide funding not to exceed \$300,000 in a lump sum to fund staffing and implementation following publication of the ROD.
  - This person shall actively pursue a Main Street designation for Hot Springs if requested by the Town of Hot Springs.
- VA shall conduct a Level I Historic American Buildings Survey (HABS) of all buildings that contribute to the Battle Mountain National Historic Landmark District that have not been recorded to HABS standards. This study will consist of laser scanning, rather than measured drawings, and large format, high resolution digital photography. The digital products of this survey will be made available locally at an appropriate repository, as well as with the State Archives, the State Historic Preservation Office and the National Park Service.
- VA shall conduct a Historic American Landscape Survey (HALS) Level II survey of the Battle Mountain National Historic Landmark District, since the documentation necessary to produce a Level I survey is not believed to be extant.

### **5.2.2.2      *Alternative A-2***

Under Alternative A-2, VA BHHCS will renovate Building 12 for use as a CBOC. VA BHHCS will construct a 100-bed RRTP and a MSOC in Rapid City. These facilities may be co-located. VA BHHCS also would construct a new MSOC in Rapid City. The potential location(s) is unknown at this time. Construction and/or renovation of sites for the proposed MSOC and RRTP have the potential to directly and indirectly affect historic properties. If selected, Alternative A2 will result in direct adverse effects to the Battle Mountain Sanitarium NHL and the Hot Springs Historic District

due to diminished integrity of setting, feeling, and association related to change of use of the majority of the VA Hot Springs Campus. Additionally, selection of Alternative A2 will result in direct effects to the physical plant of the Battle Mountain Sanitarium NHL. These effects could be mitigated through implementation of the Secretary of the Interior's *Standards for Preservation*. These direct effects could affect integrity of design, materials, and/or workmanship. There may be temporary effects to the Battle Mountain NHL and/or the Hot Springs Historic District during construction.

To resolve adverse effects associated with Alternative A2, VA has committed to:

***Measures to Avoid or Minimize Adverse Effects, including Potential Future Effects***

- VA shall follow the tenets of the NHPA and its implementing regulations at 36 CFR §800 to select a site and prepare that site for any construction in Rapid City.
- When new construction on campus could affect the exterior of a building, or if the construction could have an effect on the campus district, this construction would normally trigger additional consultation under 36 CFR § 800; however, VA and its development partners shall instead work with a Design Review Committee (DRC) to avoid and minimize the adverse effects of said construction on historic properties. This construction could include non-recurring maintenance projects, (which could contain infrastructure improvements), renovation projects, and new construction projects on the Hot Springs campus associated with this alternative.
  - VA shall invite the South Dakota State Historic Preservation Office, the NPS, and the Hot Springs Historic Preservation Commission to become members of the Design Review Committee
  - VA and its partners shall notify the DRC of plans for new construction prior to initiating design development documents.
    - VA shall include the intended scope of work in the notification.
    - VA and its partners shall take into account comments from the DRC in finalizing the scope of work and schematic designs.
  - VA and its partners shall submit draft schematic designs to the DRC for review and comment. All parties to the DRC shall have 21 days to review the draft schematic designs and provide comments on ways to improve the design to best minimize effects to contributing elements to the Battle Mountain Sanitarium.
    - VA shall respond to DRC comments in writing, by conference call, or in person. The terms of response shall be the purview of VA BHHCS.
  - Following response to comments, VA and its partners may proceed with design and begin construction so long as all requirements of this ROD governing the protection of archaeological properties have been met.
- VA shall conduct an archaeological survey in areas planned for ground disturbance related to new construction on the Hot Springs campus, to identify archaeological properties and to determine the eligibility of any discovered archaeological sites for listing in the NRHP.
  - VA shall notify the South Dakota State Historic Preservation Office, the NPS, and Native

American tribes that have potential traditional, historic, or current ties to the VA BHHCS service area of the survey at least seven days prior to initiating it.

- VA shall invite the South Dakota State Historic Preservation Office and the NPS to consult on determinations of eligibility for all identified archaeological loci not related to Native American life ways and cultural practices. VA shall invite the South Dakota State Historic Preservation Office, the NPS, and all Native American tribes that have potential traditional, historic, or current ties to the VA BHHCS service area to consult on determinations of eligibility for all identified archaeological loci related to Native American lifeways and cultural practices.
- If archaeological properties are identified and determined to be eligible for listing in the NRHP, VA shall follow the tenets of the NHPA and its implementing regulations at 36 CFR §800 to avoid, minimize, or resolve adverse effects.
- If any historic building on the Hot Springs campus shall be unoccupied for a period of at least three months, VA shall develop a comprehensive plan for the long-term preservation of such buildings.
  - VA shall hire an SOI-qualified historic architect with experience in mothballing plans to design and oversee this comprehensive plan. This plan will be in keeping with the standards outlined in NPS Preservation Brief 31, “Mothballing Historic Buildings.”
    - Preference shall be given to an individual or team that has experience developing plans for the preservation of multiple unoccupied historic buildings.
  - This plan shall address any stabilization issues and include a schedule of preservation and inspection, full system monitors, onsite security, emergency repairs such as for damage from a fire or roof collapse, a plan for building interiors, a plan for the campus landscape, and annual consultation with the South Dakota State Historic Preservation Office and the NPS.
  - VA shall provide a draft plan to the consulting parties for a 30-day review and comment period, highlighting any deviations from the recommendations in Preservation Brief 31.
    - VA shall take into account the comments from the South Dakota State Historic Preservation Office and NPS when finalizing the plan.
    - VA shall forward a copy of the final plan to the South Dakota State Historic Preservation Office and NPS.
  - This plan shall make explicit reference to other federal agency experiences with preserving historic buildings in an unoccupied state, as well as specific experiences with maintaining historic buildings in South Dakota and similar climates.
  - VA recognizes the importance of fully funding a comprehensive program for the maintenance of unoccupied historic buildings. VA also recognizes the extraordinary cost of preserving large historic campuses and acknowledges that such cost is not easily absorbed in an annual maintenance budget. VA will include costs for non-recurring maintenance and repair of the unoccupied buildings, in VA’s annual Strategic Capital Investment Plan (SCIP) ten-year planning process, with emphasis on the priority of such non-recurring maintenance and repair given by BHHCS and VISN 23. VA shall seek funding at least annually for recurring maintenance and repair of the unoccupied buildings. VA shall include in its

required six month written reports to all consulting parties, the results of any and all of VA's efforts to seek such funding.

- The plan shall include annual inspections, which will be open to the South Dakota State Historic Preservation Office and the NPS, and recorded in reports to the consulting parties.
  - Once the majority of Buildings 1, 2, 5, 6, 7, 8, 9, 10 and 11 of the campus have closed, preservation of the campus according to the tenets of the comprehensive plan will continue for a minimum of five years.
  - After these five years, VA, in consultation with ACHP, NPS, State Historic Preservation Office, and the Town of Hot Springs, may elect to renew the comprehensive plan for a period not to exceed five additional years. If VA elects to renew the comprehensive plan, this plan must be updated by an SOI-qualified historic architect, to account for extant conditions.
  - If, after either five (if VA does not renew the comprehensive plan) or ten (if VA renews the comprehensive plan) years, VA elects not to renew the comprehensive plan for the preservation of historic buildings, VA shall re-engage in consultation with respect to the VA Hot Springs campus, following the tenets of the NHPA and its implementing regulations at 36 CFR §800. This process must be initiated prior to the end of the comprehensive preservation plan implementation.
- The DPM shall work with the VHA Historian, the Hot Springs Historic Preservation Commission, the South Dakota State Museum, and the South Dakota State Archives to find a suitable display location for VA-owned materials currently in the Battle Mountain Sanitarium Museum.
  - VA may loan commemorative materials in accordance with federal law and VA protocols.
  - VA is not obligated to care for materials owned by other agencies or private citizens currently on display in the Battle Mountain Sanitarium Museum.
  - Neither VA nor the Hot Springs Historic Preservation Commission will be monetarily obligated to fund a new display.
  - If an appropriate site cannot be found within the Town of Hot Springs, VA may look at other VA sites or pursue an agreement with the South Dakota State Museum or State Archives.

### ***Measures to Mitigate Adverse Effects***

- Following publication of the ROD, and until portions of the Hot Springs campus are transferred to another entity or the campus buildings are preserved in accordance with the comprehensive preservation plan, VA shall make available to a local group or organization the greenhouse, so that group may determine if it is feasible to reactivate, operate and maintain it, and to use it to grow vegetation for the campus or town landscape.
- VA shall seek to develop a programmatic agreement for routine maintenance of the historic Ft. Meade and Sioux Falls VA-owned facilities in consultation with the South Dakota State Historic Preservation Office and the ACHP.



- VA shall support the Hot Springs Historic Preservation Commission to complete an application for the Preserve America program for the town of Hot Springs.
  - This support may include, but is not limited to, technical assistance, staff support, shipping fees, copy fees, and photography.
- VA shall host an annual reunion for patients, staff, and other community residents to commemorate the history of the Battle Mountain Sanitarium and celebrate the service of the residents of Hot Springs to our nation and our nation's Veterans.
  - During this reunion, VA shall establish an oral history booth/tent so participants may record oral histories.
    - VA shall utilize a qualified historian to oversee development of the oral history program.
    - VA, in coordination with the Hot Springs Historic Preservation Commission and other interested consulting parties, shall develop a plan to annually record oral histories of patients, Veterans, staff members, and community residents related to the history of the Battle Mountain Sanitarium and the spirit of service in the Hot Springs area.
    - VA shall solicit assistance from the local schools to develop questions and transcribe all recorded histories.
    - VA shall archive at least one copy of the digital oral histories and the transcripts at the South Dakota State Archives and one copy with a publically-accessible archive in Hot Springs.
- VA shall host this annual event for at least five years following publication of this ROD. VA will host the annual event within the boundaries of Hot Springs.
- During the annual reunion, VA shall host an annual meeting with historic property consulting parties to update them about the implementation of measures to resolve adverse effects to historic properties. These meetings will continue for at least 5 years.
- Within applicable laws and regulations, VA shall produce or contract for the production of, a book about the historical significance of the Battle Mountain Sanitarium/VA Hot Springs campus, the Hot Springs Historic District, and the spirit of service to country in Hot Springs
  - This book shall be authored by a professional writer with experience writing commemorative history books; it shall not exceed 300 pages. This book shall contain photos of the Battle Mountain Sanitarium prior to implementing any mothballing plan. At least one chapter of the book will be devoted to the National Homes for Disabled Volunteer Soldiers. This book shall include information gathered from the oral history project established at the annual Battle Mountain Sanitarium/VA Hot Springs reunions.

- VA shall provide the consulting parties an opportunity to review and comment on the book outline and text. The consulting parties may provide documentation of the Battle Mountain Sanitarium at their discretion to support VA in development of the book.
- VA shall develop an e-reader version of the book, and make it available commercially
- VA shall produce or contract for the production of not less than 250 copies and not more than 2,500 copies of the book. Any profits realized by the sale of this book will be managed in accordance with applicable laws and regulations.
- VA shall create a photographic display related to the history of the Battle Mountain Sanitarium and the importance of the mineral springs in Hot Springs in a public area of Building 12 or any new construction associated with this Alternative.
  - This photographic display is intended to be a documentation of Battle Mountain Sanitarium through the years, and shall include at least three photographs of the Battle Mountain Sanitarium prior to executing this ROD. There is no limit on the number of historical photos that may be included in this display.
    - VA shall accept photograph recommendations from the South Dakota State Historic Preservation Office and the NPS, as well as other consulting parties.
    - All photographs shall be fully labeled, cited, dated, and archivally stable to allow for VA scanning.
- VA shall develop a mobile application (“app”) to memorialize the Battle Mountain Sanitarium.
  - This app shall include historic photos of the campus, oral histories, and historic context related to the Battle Mountain Sanitarium. VA shall reference the design and purpose of the app designed for the Clement J. Zablocki Veterans Affairs Medical Center (Milwaukee VAMC)/Northwestern Branch of the National Home for Disabled Volunteer Soldiers.
  - This app shall be made available to the public, free of charge (excluding personal user fees as charged by the user’s service provider), prior to VA closing the majority of buildings 1-11 of the Battle Mountain Sanitarium campus and remain available for a period not less than three years.
  - The app platform compatibility shall be determined at the time of development based on current industry standards.
  - Once completed, no updates to the app shall be planned.
- VA shall support the Hot Springs Historic Preservation Commission in an effort to complete a re-survey of the Hot Springs Historic District and submit an amendment to the NRHP nomination to the South Dakota State Historic Preservation Office for consideration.

- This support may include, but is not limited to, hiring an SOI-qualified historic preservation consultant, advertising for volunteer photographers, and printing/shipping costs. VA shall not provide more than \$10,000 in monetary or in-kind support.
- VA shall allow the Hot Springs Historic Preservation Commission to submit photographs of the VA BHHCS Hot Springs Campus for inclusion in the amended NRHP nomination. The Hot Springs Historic Preservation Commission shall request access not less than 14 days prior to the intended survey. VA BHHCS staff will accompany the photographer to ensure all patient privacy requirements are met.
- VA shall conduct a Level I Historic American Buildings Survey (HABS) of all buildings that contribute to the Battle Mountain National Historic Landmark District that have not been recorded to HABS standards. This study will consist of laser scanning, rather than measured drawings, and large format, high resolution digital photography. The digital products of this survey will be made available locally at an appropriate repository, as well as with the State Archives, the State Historic Preservation Office and the National Park Service.
- VA shall conduct a Historic American Landscape Survey (HALS) Level II survey of the Battle Mountain National Historic Landmark District, since the documentation necessary to produce a Level I survey is not believed to be extant.

### **5.2.2.3      *Alternative B***

Under Alternative B, VA BHHCS would construct a new CBOC and a new RRTP off the VA campus in Hot Springs. These facilities may be co-located. VA BHHCS also would construct a new MSOC in Rapid City. If selected, Alternative B will result in direct adverse effects to the Battle Mountain Sanitarium and the Hot Springs Historic District due to change in use that would diminish the integrity of setting, feeling, and association of the historic properties. Construction and/or renovation of sites for the proposed CBOC, RRTP, and MSOC have the potential to directly and indirectly affect historic properties.

The measures designed to avoid, minimize, and/or mitigate the effects of Alternative B are identical to those listed in Section 5.2.2.1 Alternative A1.

### **5.2.2.4      *Alternative C***

Under Alternative C, VA BHHCS would renovate Building 12 for use as a CBOC and renovate the domiciliary to support a 100-bed RRTP. VA would construct a MSOC at a site in Rapid City. This site has not yet been identified. If selected, Alternative C will result in direct effects to the physical plant of the Battle Mountain Sanitarium NHL. These effects could be mitigated through implementation of the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. These direct effects could affect integrity of design, materials, and/or workmanship. There may be temporary effects to the Battle Mountain NHL and/or the Hot Springs Historic District during construction. Construction and/or renovation of sites for the proposed MSOC has the potential to directly and indirectly affect historic properties.

The measures designed to avoid, minimize, and/or mitigate the effects of Alternative C are identical to those listed in Section 5.2.2.2 Alternative A2.

### **5.2.2.5      *Alternative D***

Under Alternative D, VA BHHCS would construct a new CBOC in Hot Springs but not on the VA Hot Springs Campus. VA BHHCS also would construct a new 24-bed RRTP off-site but in Hot Springs. VA BHHCS would construct a new MSOC and a new 76-bed RRTP in Rapid City. These facilities potentially would be co-located. If selected, Alternative D will result in direct adverse effects to the Battle Mountain Sanitarium and the Hot Springs Historic District due to change in use that would diminish the setting, feeling, and association of the historic properties. Construction and/or renovation of sites for the proposed CBOC, RRTPs, and MSOC have the potential to directly and indirectly affect historic properties.

The measures designed to avoid, minimize, and/or mitigate the effects of Alternative D are identical to those listed in Section 5.2.2.1 Alternative A1.

### **5.2.2.6      *Alternative E***

Under Alternative E, also known as the “Save the VA” proposal, VA would make external and internal revisions to buildings on campus to meet VA inpatient and accessibility standards, including renovations to the hospital (Building 12) for expanded inpatient and CLC services. VA would renovate the domiciliary into an RRTP (a minimum of 110 beds) and complete other necessary upgrades and/or renovations for new programs and services. If selected, Alternative E will result in direct effects to the physical features of the Battle Mountain Sanitarium NHL, thus also affecting the Hot Springs Historic District. Effects could relate to integrity of design, materials, or workmanship. These effects may be avoided or minimized through use of the Secretary of the Interior’s *Standards for the Treatment of Historic Properties*.

#### ***Measures to Avoid or Minimize Adverse Effects, including Potential Future Effects***

- VA shall follow the tenets of the NHPA and its implementing regulations at 36 CFR §800 to select a site and prepare that site for any construction in Rapid City.
- VA shall conduct an archaeological survey in areas planned for ground disturbance related to new construction on the Hot Springs campus, to identify archaeological properties and to determine the eligibility of any discovered archaeological sites for listing in the NRHP.
  - VA shall notify the South Dakota State Historic Preservation Office, the NPS, and Native American tribes that have potential traditional, historic, or current ties to the VA BHHCS service area of the survey at least seven days prior to initiating it.
  - VA shall invite the South Dakota State Historic Preservation Office and the NPS to consult on determinations of eligibility for all identified archaeological loci not related to Native American lifeways and cultural practices. VA shall invite the South Dakota State Historic Preservation Office, the NPS, and all Native American tribes that have potential traditional, historic, or current ties to the VA BHHCS service area to consult on determinations of eligibility for all identified archaeological loci related to Native American lifeways and cultural practices.

- If archaeological properties are identified and determined to be eligible for listing in the NRHP, VA shall follow the tenets of the NHPA and its implementing regulations at 36 CFR §800 to avoid, minimize, or resolve adverse effects.
- All exterior changes to contributing elements of the NHL shall be reviewed by the Design Review Committee, as described below. VA and its partners shall follow the SOP's Standards for Treatment of Historic Properties in all changes to the **interior** spaces of the Battle Mountain Sanitarium listed below.
  - Building 1- Entry (stairs, round room open to dome).
  - Building 1- Director's Office (Rooms 100B, 107B).
- When new construction on campus could affect the exterior of a building, or if the construction could have an effect on the campus district, this construction would normally trigger additional consultation under 36 CFR § 800; however, VA and its development partners shall instead work with a Design Review Committee (DRC) to avoid and minimize the adverse effects of said construction on historic properties. This construction could include non-recurring maintenance projects, (which could contain infrastructure improvements), renovation projects, and new construction projects on the Hot Springs campus associated with this alternative.
  - VA shall invite the South Dakota State Historic Preservation Office, the NPS, and the Hot Springs Historic Preservation Commission to become members of the Design Review Committee
  - VA and its partners shall notify the Design Review Committee of plans for new construction prior to initiating design development documents.
    - VA shall include the intended scope of work in the notification.
    - VA and its partners shall take into account comments from the Design Review Committee in finalizing the scope of work and schematic designs.
  - VA and its partners shall submit draft schematic designs to the Design Review Committee for review and comment. All parties to the Design Review Committee shall have 21 days to review the draft schematic designs and provide comments on ways to improve the design to best minimize effects to contributing elements to the Battle Mountain Sanitarium.
    - VA shall respond to Design Review Committee comments in writing, by conference call, or in person. The terms of response shall be the purview of VA BHHCS.
  - Following response to comments, VA and its partners may proceed with design and begin construction so long as all requirements of this ROD governing the protection of archaeological properties have been met.
- No demolition of historic building(s) is planned or anticipated at this time. If VA determines such an undertaking is necessary in fulfillment of its mission, VA will proceed in accordance with federal laws and internal guidance, including but not limited to, NHPA and NEPA.
- The DPM shall be responsible for ensuring preservation of the VA-owned materials on display in the Battle Mountain Sanitarium Museum during renovation or rehabilitation. The Dedicated Project Manager shall work with VA BHHCS leadership to find a suitable location on the VA Hot Springs Campus for display after construction is complete.

### ***Measures to Mitigate Adverse Effects***

- VA shall seek to develop a programmatic agreement for routine maintenance of the historic Ft Meade and Sioux Falls VA-owned facilities in consultation with the South Dakota State Historic Preservation Office and the ACHP.
- VA shall create in a publicly accessible area, prior to commencing any new construction on the Hot Springs VA medical center campus, a photographic display related to the history of the Battle Mountain Sanitarium and the importance of the mineral springs in Hot Springs. This photographic display is intended to be a documentation of Battle Mountain Sanitarium through the years, and shall include at least three photographs of the Battle Mountain Sanitarium prior to executing this ROD. There is no limit on the number of historical photos that may be included in this display.
  - VA shall accept photograph recommendations from the South Dakota SHPO and the NPS, as well as other consulting parties.
  - All photographs shall be fully labeled, cited, dated, and archivally stable to allow for VA scanning.

#### **5.2.2.7      *Alternative F***

Under Alternative F, VA BHHCS would continue to utilize the VA Hot Springs Campus to provide health care to area Veterans. VA BHHCS would upgrade and/or renovate the campus as needed to provide high-quality health care. If selected, Alternative F will result in direct effects to the physical features of the Battle Mountain Sanitarium NHL, thus also affecting the Hot Springs Historic District. Effects could relate to integrity of design, materials, or workmanship. These effects may be avoided or minimized through use of the Secretary of the Interior's *Standards for the Treatment of Historic Properties*.

### ***Measures to Avoid or Minimize Adverse Effects, including Potential Future Effects***

- VA shall conduct an archaeological inventory and evaluation wherever construction activities will cause ground disturbance.
- VA shall follow the SOI's Standards for Treatment of Historic Properties in all changes to **interior** spaces of the Battle Mountain Sanitarium listed below.
  - Building 1 - Entry (stairs, round room open to dome).
  - Building 1- Director's Office (Rooms 100B, 107B).
- No demolition of historic building(s), renovation of extant buildings, or construction of new buildings is planned or anticipated at this time. If VA determines such an undertaking is necessary in fulfillment of its mission, VA will proceed in accordance with federal laws and internal guidance, including but not limited to, NHPA and NEPA.
- The DPM shall be responsible for ensuring preservation of the VA-owned materials on display in the Battle Mountain Sanitarium Museum during renovation or rehabilitation. The



Dedicated Project Manager shall work with VA BHHCS leadership to find a suitable location on the VA Hot Springs Campus for display after construction is complete.

### ***Measures to Mitigate Adverse Effects***

- VA shall seek to develop a programmatic agreement for routine maintenance of the historic Ft Meade and Sioux Falls VA-owned facilities in consultation with the South Dakota State Historic Preservation Office and the ACHP.
- VA shall create a photographic display of the campus in the entryway of Building 1. This photographic display will be related to the history of the Battle Mountain Sanitarium and the importance of the mineral springs in Hot Springs. This photographic display is intended to be a documentation of Battle Mountain Sanitarium through the years, and shall include at least three photographs of the Battle Mountain Sanitarium prior to executing this ROD. There is no limit on the number of historical photos that may be included in this display.
  - VA shall accept photograph recommendations from the South Dakota SHPO and the NPS, as well as other consulting parties.
  - All photographs shall be fully labeled, cited, dated, and archivally stable to allow for VA scanning.
- If application of the SOI's Standards for Treatment of Historic Properties is not sufficient to eliminate any adverse effects to a historic property from construction/renovation and the effect to the Hot Springs Historic District is significant, VA shall support the Hot Springs Historic Preservation Commission to complete a re-survey of the Hot Springs Historic District and submit an amendment to the NRHP nomination to the South Dakota State Historic Preservation Office for consideration.
  - This support may include, but is not limited to, hiring a SOI-qualified historic preservation consultant, advertising for volunteer photographers, and printing/shipping costs. VA shall not provide more than \$10,000 in monetary or in-kind support.
  - VA shall allow the Hot Springs Historic Preservation Commission to photograph the VA Hot Springs Campus for inclusion in the amended National Register nomination. The Hot Springs Historic Preservation Commission shall request access not less than 14 days prior to the intended survey. VA staff will accompany the photographer to ensure all patient privacy requirements are met.

### ***5.2.2.8 Supplemental Alternative G***

Under Supplemental Alternative G, VA will seek adaptive reuses for the VA BHHCS through other VA uses, enhanced use leases, outleasing to other Federal or private entities, or GSA disposal, as outlined in section 5.2.1.4. Supplemental Alternative G will result in direct adverse effects to the Battle Mountain Sanitarium and the Hot Springs Historic District due to change in use that would diminish the setting, feelings, and association of the historic properties. If redevelopment is completed by a non-federal agency, and absent of any preservation requirements, this supplemental alternative has the potential to result in direct adverse effects that threaten the long-term

preservation of the historic character of the Battle Mountain Sanitarium NHL. These effects may be avoided or minimized through the imposition of substantive preservation conditions on future developers and use of the Secretary of the Interior's *Standards for the Treatment of Historic Properties* in physical plant changes.

#### 5.2.2.8.1 Alternative A-1 with Supplemental Alternative G

Under Alternative A-1 with Supplemental Alternative G, VA BHHCS has committed to implementing all the measures to avoid, minimize, or mitigate adverse effects as described in Section 5.2.2.1. Additionally, VA BHHCS has agreed to design and implement a comprehensive marketing strategy to identify redevelopment partners. If Alternative A-1 with Supplemental Alternative G is selected, VA has committed to:

- Develop a vigorous process to identify possible redevelopment partners for the Battle Mountain Sanitarium campus. This process will include alternative VA uses, other federal agency uses, state or local government uses, Native American uses, and private developer projects, as well as mixed use or multiuser coalitions. VA shall seek input from the South Dakota SHPO, ACHP, National Trust for Historic Preservation, and NPS in developing this redevelopment process and will examine available public-private partnership authorities such as an enhanced-use lease and NHPA Section 111 leasing. This process will be distributed to consulting parties via email within 120 days of issuance of the ROD.
- Establish an Integrated Project Team (IPT) at appropriate levels across the VA enterprise to evaluate possible alternative VA uses of the Battle Mountain Sanitarium campus that are not related to the delivery of Veteran health care services. The DPM will serve on the IPT. This process will include outreach to VHA programs that deliver administrative support services, Veterans Benefit Administration programs, National Cemetery Administration program needs, and VA staff office needs. This process will be documented, continue through the period of transition for the campus, and be reported in, at minimum, reports to the consulting parties on a semi-annual basis. Additionally, VA will accept comments and suggestions on the marketing plan within 30 days of reporting. As necessary, the IPT will present decision points to Secretary or his/her designee.
- The IPT will be composed of VA employees from several departments within VA including, but not limited to, Real Property Service, the Office of Asset Enterprise Management, the Office of Construction and Facilities Management (including the Federal Preservation Office and Real Property Service), VISN 23, and the DPM. Members will be selected for their experience and areas of expertise.
- To the extent Secretary determines to seek an external user for a portion of the campus, VA shall either seek a federal agency partner who can take over the property, or engage the General Services Administration (GSA) in the property excessing process. The first step in either process is to satisfy requirements under the *McKinney-Vento Act* as to offering the campus for homeless housing.
- Steps taken to identify federal partners shall include: correspondence from Secretary to federal agency officials, consultation and outreach to federal preservation officers throughout the federal family, and consultation and outreach to federal real property acquisition personnel throughout the federal family. While this outreach work may be facilitated by a contractor, the process will remain the responsibility of VA. This process will be documented, continue through the period of transition for the campus, and be

reported in, at minimum, reports to the consulting parties.

- If VA determines that it will excess any of the unused portion of the campus through GSA, GSA will follow its own disposal process, subject to the requirements of the NHPA.
- If VA chooses to excess or dispose of any of the unused portion of the campus, VA will require preservation conditions be attached to the property.
  - Disposal preservation conditions will include, at minimum, required consultation with local tribal representatives and other appropriate consulting parties, required SOI-qualified personnel to plan and oversee any construction projects, archaeological studies overseen by SOI-qualified personnel where any ground disturbance will take place, adherence to the SOI Standards for the Treatment of Historic Properties, a process to account for unexpected discoveries that is consistent with 36 CFR §800.13, and a process of annual reporting and consultation with the South Dakota SHPO and the NPS for a period of at least five years from the date of transfer.

#### **5.2.2.8.2 Alternative A-2 with Supplemental Alternative G**

Under Alternative A-2 with Supplemental Alternative G, VA BHHCS has committed to implementing all the measures to avoid, minimize, or mitigate adverse effects as described in Section 5.2.2.2. Additionally, VA BHHCS has agreed to design and implement a comprehensive marketing strategy to identify redevelopment partners as described in Section 5.2.2.8.2. If Alternative A-2 with Supplemental Alternative G is selected, VA has committed to:

- VA shall develop and implement a marketing strategy to identify redevelopment partners.
- VA shall develop a vigorous process to identify possible redevelopment partners for the unused portion of the Battle Mountain Sanitarium campus. This process will include alternative VA uses, other federal agency uses, state or local government uses, Native American uses, and private developer projects, as well as mixed use or multiuser coalitions. VA shall seek input from the South Dakota State Historic Preservation Office, ACHP, National Trust for Historic Preservation, and NPS in developing this redevelopment process and will examine available public-private partnership authorities such as an enhanced-use lease and NHPA Section 111 leasing. This process will be distributed to consulting parties via email within 120 days of issuance of this ROD.
- VA shall establish an integrated project team (IPT) at appropriate levels across the VA enterprise to evaluate possible alternative VA uses of the unused Battle Mountain Sanitarium campus that are not related to the direct delivery of Veteran health care services. The DPM will serve on the IPT. This process will include outreach to VHA programs that deliver administrative support services, Veterans Benefit Administration programs, National Cemetery Administration program needs, and VA staff office needs. This process will be documented, continue through the period of transition for the campus, and be reported in, at minimum, reports to the consulting parties on a semi-annual basis. Additionally, VA will accept comments and suggestions on the marketing plan within 30 days of reporting. As necessary, the IPT will present decision points to Secretary of the VA (Secretary) or his/her designee.

- The IPT will be composed of VA employees from several departments within VA including, but not limited to, the Office of Asset Enterprise Management, the Office of Construction and Facilities Management (including the Federal Preservation Office and Real Property Service), VISN 23, and the DPM. Members will be selected for their experience and areas of expertise.
- To the extent the Secretary determines to seek an external user for a portion of the campus, VA shall either seek a federal agency partner who can take over the property, or engage the General Services Administration (GSA) in the property excessing process. The first step in either process is to satisfy requirements under the *McKinney-Vento Act* as to offering the campus for homeless housing.
- Steps taken to identify federal partners shall include: correspondence from Secretary to federal agency officials, consultation and outreach to federal preservation officers, and consultation and outreach to federal real property acquisition personnel. While this outreach work may be facilitated by a contractor, the process will remain the responsibility of VA. This process will be documented, continue through the period of transition for the campus, and be reported in, at minimum, reports to the consulting parties.
- If VA determines that it will excess any of the unused portion of the campus through GSA, GSA shall follow its own disposal process, subject to the requirements of the NHPA.
- If VA chooses to excess or dispose of any of the unused portion of the campus, VA shall require preservation conditions be attached to the property.
- Disposal preservation conditions will include, at minimum, required consultation with local tribal representatives and other appropriate consulting parties, required SOI-qualified personnel to plan and oversee any construction projects, archaeological studies overseen by SOI-qualified personnel where any ground disturbance will take place, adherence to the SOI Standards for the Treatment of Historic Properties, a process to account for unexpected discoveries that is consistent with 36 CFR §800.13, and a process of annual reporting and consultation with the South Dakota State Historic Preservation Office and the NPS for a period of at least five years from the date of transfer.

#### **5.2.2.8.3      Alternative B with Supplemental Alternative G**

The measures designed to avoid, minimize, and/or mitigate the effects of Alternative B with Supplemental Alternative G are identical to those listed in Section 5.2.2.8.1 Alternative A1 with Supplemental Alternative G.

#### **5.2.2.8.4      Alternative C with Supplemental Alternative G**

The measures designed to avoid, minimize, and/or mitigate the effects of Alternative C with Supplemental Alternative G are identical to those listed in Section 5.2.2.8.2 Alternative A2 with Supplemental Alternative G.

#### **5.2.2.8.5      Alternative D with Supplemental Alternative G**

The measures designed to avoid, minimize, and/or mitigate the effects of Alternative D with Supplemental Alternative G are identical to those listed in Section 5.2.2.8.1 Alternative A1 with Supplemental Alternative G.

## 6.0 AGENCY COORDINATION AND PUBLIC INVOLVEMENT

The goals of public involvement and agency coordination are to provide thorough information in a convenient and timely manner to allow meaningful input to the integrated *National Environmental Policy Act* (NEPA)/*National Historic Preservation Act* (NHPA) process, and help facilitate decisions to be made by the U.S. Department of Veterans Affairs (VA). The public and agencies are commonly referred to as “stakeholders”. Stakeholders include those who may be affected by or have an interest in VA’s proposal and the NEPA/NHPA process, including individuals, interest groups, community organizations, elected officials, tribal governments, and federal, state, or local government agencies. Stakeholders also include consulting parties as defined by 36 CFR Part 800.2(c), the implementing regulations of Section 106 of the NHPA.

Federal regulations, policies, and guidelines provide the framework within which VA remains accountable for timely and effective stakeholder involvement in decisions which may interest or affect them. This chapter provides an overview of the framework to involve stakeholders during the integrated NEPA/NHPA process.

### 6.1 Public Involvement Process

The public involvement process begins with scoping and continues throughout the preparation of the environmental impact statement (EIS) until VA signs the record of decision. This section describes the milestones and timeframes when stakeholders are involved during the NEPA process.

#### 6.1.1 Scoping

“Scoping” is the term used in the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [CFR] 1501.7) to define the process for determining the scope of issues to address during the environmental analysis of an agency’s proposed action. Scoping also helps identify issues that are neither significant nor relevant to a proposal, or alternatives that are not feasible, thereby eliminating these issues or alternatives from detailed analysis.

##### 6.1.1.1 Notice of Intent

The Notice of Intent (NOI) is the U.S. government’s means of notifying the public and interested parties of an agency’s intention to prepare an EIS for its proposed action. VA published NOIs in the Federal Register on May 16, 2014, announcing the preparation of an integrated EIS for the VA BHHCS reconfiguration proposal and the start of the public scoping period; and on June 13, 2014, announcing the extension of the public scoping comment period.

##### 6.1.1.2 Scoping Notice and News Release

Scoping notices announcing the reconfiguration proposal, schedules for public scoping meetings, and an extension to the comment period were published in 15 newspapers covering communities in the VA BHHCS catchment area in South Dakota, Nebraska, and Wyoming. The two scoping notices were paid publications in the public notice or legal section of the newspapers. VA BHHCS also prepared news releases announcing the NOI, schedules and locations for public scoping meetings, and the extension to the public comment period along with additional public scoping



meetings. The three news releases were circulated to more than 50 media outlets, and were posted on the VA BHHCS reconfiguration proposal webpage ([www.blackhills.va.gov/vablackhillsfuture](http://www.blackhills.va.gov/vablackhillsfuture)).

### **6.1.1.3 Scoping Meetings**

VA BHHCS hosted 10 scoping meetings in 9 different communities throughout the service area between June 11 and 27, 2014. The scoping meetings offered stakeholders an opportunity to learn about and provide comments on the reconfiguration proposal. Attendance at the meetings ranged from 3 to 115 people. The meeting format consisted of an open house followed by a presentation that explained the purpose of and need for the reconfiguration proposal, alternatives for implementing the reconfiguration, the integration of the NHPA process with the EIS, and the public's role in contributing to the NEPA process. Upon completion of the presentation, the attendees were invited to provide verbal comments.

### **6.1.1.4 Scoping Summary**

The public scoping period was open for 90 days from May 16 through August 16, 2014. The scoping process provided sufficient opportunity for stakeholders to express their comments and provide meaningful input to the integrated NEPA/NHPA process. There were 386 written comments received, 159 verbal comments made during the scoping meetings, and a form letter submitted by 138 individuals. The comments focused generally on the purpose, need, and alternatives for the reconfiguration; potential effects to local social and economic conditions, community services, and utilities; the National Historic Landmark (NHL) status of the VA Hot Springs Campus and potential adverse effects to historic properties and cultural resources; integration of NHPA consultation with the NEPA process; and implementation of the NEPA process. A summary of the public scoping process and the comments received is included in Appendix D, and can also be viewed at the VA BHHCS webpage ([www.blackhills.va.gov/vablackhillsfuture](http://www.blackhills.va.gov/vablackhillsfuture)).

## **6.1.2 EIS Status Open House**

Although not required by CEQ regulations implementing NEPA or by VA's NEPA regulations or guidance, VA BHHCS hosted an open house in six communities within the service area between November 17 and 20, 2014, to update stakeholders on the status of preparing the EIS. Stakeholders were provided with additional information on the purpose of and need for the reconfiguration, a summary of public scoping comments, and a map of the proposed area in which to identify and assess effects to historic properties. The potential health care services were outlined on a chart to explain the basis for the facility types and changes proposed under each alternative and location. VA BHHCS and EIS contractor staff informally discussed the information with attendees; no public testimony or comments were invited or recorded. The information presented at the open houses can be viewed at the VA BHHCS reconfiguration webpage ([www.blackhills.va.gov/vablackhillsfuture](http://www.blackhills.va.gov/vablackhillsfuture)).

## **6.1.3 Draft EIS Comment Period**

VA published the Notice of Availability (NOA) of the Draft EIS in the Federal Register, inviting public comments on the content of the document on October 30, 2015. Notices were published in 15 local newspapers throughout the service area, posted online (along with other project updates and information) on the VA BHHCS reconfiguration webpage ([www.blackhills.va.gov/vablackhillsfuture](http://www.blackhills.va.gov/vablackhillsfuture)), and provided to the media outlets covering the service

area. The EPA also published a NOA in the Federal Register on November 6, 2015, officially starting a 60-day public comment period.

The VA BHHCS Reconfiguration Draft EIS was available for viewing on the VA BHHCS Web site [www.blackhills.va.gov/vablackhillsfuture/](http://www.blackhills.va.gov/vablackhillsfuture/) and at the Hot Springs, Rapid City Downtown, Sturgis, Chadron, Alliance, Lied Scottsbluff, and Pierre (Rawlins Municipal) public libraries, as well as in Pine Ridge at the Oglala Lakota College Pine Ridge Center library on the high school campus. More than 500 stakeholders who had previously signed on to the project mailing list were mailed a postcard with the NOA of the Draft EIS.

VA BHHCS hosted public comment meetings in six communities within the service area during the 60-day comment period. Public meeting dates, locations and times were made available online at the VA BHHCS website. The meeting locations and dates were as follows:

Rapid City, SD: November 30, 2015; 5:30 pm (Best Western Ramkota Hotel)

Hot Springs, SD: December 1, 2015; 5:30 pm (Red Rock River Resort)

Pine Ridge, SD: December 2, 2015; 1:30 pm (Pine Ridge School)

Chadron, NE: December 2, 2015; 6:30 pm (Chadron State College)

Alliance, NE: December 3, 2015; 1:00 pm (Newberry's)

Scottsbluff, NE: December 3, 2015; 6:30 pm (Gering Civic Center, Gering, NE).

The meetings provided stakeholders an opportunity to comment on the potential environmental, social, and economic impacts as described in the Draft EIS. The meeting format consisted of a presentation to explain the purpose of and need for the reconfiguration proposal, described the alternatives, and summarized the analysis and potential impacts associated with each alternative. The presentation and verbal comments at each meeting were transcribed by a professional court reporter. Throughout the public comment period, comments could also be submitted in writing by mail to VA BHHCS, by email to VA BHHCS, through the federal regulations docket, or through a website managed by the EIS contractor.

The public comment period was extended an additional 30 days to February 5, 2016, due to public requests and because the original comment period included the Thanksgiving and Christmas holidays. The comment period was then extended to March 6, 2016 and subsequently to May 5, 2016 in response to requests from the public and other stakeholders, including consulting parties participating in the NEPA/NHPA substitution and consultation process (see Section 6.2) and upon the advice of ACHP. A final extension was given to June 20, 2016 to provide for a 30-day review period following distribution of measures designed to mitigate the potential effects of the alternatives on historic properties that are anticipated to appear in the ROD. Responses to comments received during the comment period are provided in Appendix E of the Final EIS.

## 6.2 NEPA/NHPA Substitution and Consultation

The reconfiguration proposal is a federal undertaking subject to NHPA, specifically Section 106, and Advisory Council on Historic Preservation (ACHP) regulations implementing Section 106 (36 CFR 800). VA has chosen to integrate Section 106 compliance within the overall NEPA framework, following the substitution process of 36 CFR 800.8(c).

VA BHHCS used *NEPA and NHPA, A Handbook for Integrating NEPA and Section 106* as guidance in preparing this EIS. Developed jointly by ACHP and CEQ, the handbook includes a checklist for preparing environmental documents to comply with the Section 106 substitution process. This checklist is included in Appendix C, NEPA/NHPA Substitution Process.

### 6.2.1 Notification

VA's Federal Preservation Officer initiated informal conversation in September 2012 with the ACHP, National Park Service (NPS), South Dakota State Historic Preservation Office (SHPO), and other stakeholders of the possibility of substituting the NEPA process for Section 106 compliance for the reconfiguration proposal being considered at that time. By letter dated May 13, 2014, VA BHHCS formally notified ACHP, the Secretary of the Interior (through an NPS representative), SHPO, and numerous other stakeholders of its intent to integrate the NHPA Section 106 evaluation and consultation procedures into the NEPA environmental impact analysis following the substitution process. This letter and the list of recipients are included in Appendix C, NEPA/NHPA Substitution Process.

### 6.2.2 Identification of Consulting Parties

Consulting parties, as defined under 36 CFR 800.2(c), include: (1) SHPO; (2) Indian tribes; (3) representatives of local governments; (4) applicants for federal assistance, permits, licenses and other approvals; and (5) "certain individuals and organizations with a demonstrated interest in the undertaking [who] may participate as consulting parties due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking's effects on historic properties". Because the reconfiguration proposal involves an NHL, the Secretary of the Interior, represented by the NPS, is included as a consulting party pursuant to Section 110(f) of the NHPA and 36 CFR 800.10, which address special requirements for protecting an NHL.

VA BHHCS identified potential consulting parties from stakeholders who were notified by letter dated May 13, 2014, of the intent to prepare an EIS that integrates the Section 106 compliance requirements of the NHPA within the framework of the NEPA process. VA identified other potential consulting parties through public scoping meetings, recommendations from other consulting parties, and requests from organizations. Attendees at the public scoping meetings were invited to submit written requests to VA BHHCS to be considered as a consulting party. Agencies and organizations that submitted written requests to be consulting parties during the scoping period were accepted. VA BHHCS conducted additional outreach to Native American tribes to participate as consulting parties (see Section 6.3). By letter dated October 9, 2014, VA BHHCS notified stakeholders of the preliminary list of consulting parties identified from the scoping process. VA BHHCS again notified four Veterans service organizations by letter dated January 15, 2015, of their opportunity to participate in the process as a consulting party, and accepted those organizations that responded in writing.

Table 6-1 lists the 17 NHPA Section 106 consulting parties identified as of the publication of the Draft EIS. Correspondence pertaining to consulting party identification and consulting party representatives is included in Appendix C, NEPA/NHPA Substitution Process.

**Table 6-1. NHPA Section 106 Consulting Parties**

Advisory Council on Historic Preservation
American Federation of Government Employees, Hot Springs Local
Assiniboine and Sioux Tribes of the Fort Peck Reservation
City of Hot Springs
Department of the Interior, National Park Service
Fall River County Commissioners Office
Fall River County Historical Society
Hot Springs Certified Local Government–Historic Preservation Commission
Individual Veteran
Kiowa Tribe of Oklahoma
National Trust for Historic Preservation
Northern Arapaho Tribe
Oglala Sioux Tribe of the Pine Ridge Reservation
Save the VA Organization
South Dakota American Legion
South Dakota State Historic Preservation Office
Yankton Sioux Tribe

### 6.2.3 Consultation on Effects to Historic Properties

VA first publicized its proposal to reconfigure services within the BHHCS service area in December 2011 and conducted a series of town hall meetings with affected stakeholders throughout the area. VA hosted an initial Section 106 consultation meeting on May 31, 2012, to receive input from stakeholders regarding potential effects to historic properties, primarily the VA Hot Springs Campus, which encompasses the Battle Mountain Sanitarium NHL. With the Federal Register publication of the NOI on May 16, 2014, VA BHHCS re-initiated the consultation process to identify and address effects to historic properties with the start of the integrated NEPA/NHPA process.

VA BHHCS hosted workshops and a teleconference with consulting parties between November 2014 and April 2015 to consult on:

- Geographic area of potential effects (APE) of the reconfiguration alternatives in Hot Springs and Rapid City
- Identification of historic properties within the geographic APE
- Types of actions that potentially affect historic properties

- Criteria and examples of adverse effects
- Approach to identifying and assessing potential adverse effects to historic properties
- Possible measures to avoid, minimize, or mitigate adverse effects.

The summaries of the consultation and discussions from the workshops and teleconference are included in Appendix C, NEPA/NHPA Substitution Process.

Following publication of the draft EIS in October 2015, VA BHHCS hosted two additional consultation meetings to discuss potential effects to historic properties as a result of the proposed reconfiguration. At these meetings on January 21 and February 17, 2016, VA and the consulting parties discussed:

- Expansion of the APE to encompass the Fort Meade VA Medical Center campus
- Identification of historic properties within the APEs
- Potential adverse effects of each alternative, including the preferred alternative
- Approaches to avoiding or minimizing potential direct and indirect adverse effects
- Potential measures to mitigate potential effects of the alternatives.

Transcripts of these meetings are included in Appendix C, NEPA/NHPA Substitution Process.

Initial consultation letters were sent formally through US Mail to the identified consulting parties. Following this action, nearly all correspondence with consulting parties was conducted through email. Formal letters were sent in limited cases, as notification of objections to the ACHP, but subsequently distributed via email to all consulting parties.

Consulting parties provided written communication throughout the consultation process, most notably following distribution of draft and revised draft measures to resolve adverse effects. These communications were considered to be part of the administrative record and are included in Appendix C, NEPA/NHPA Substitution Process. The written feedback informed the VA's decision-making process in developing and refining the measures to resolve adverse effects and in reconsidering its preferred alternative.

## **6.3 Native American Consultation**

VA consults with federally recognized tribal governments in accordance with NHPA Section 106 on issues relating to historic properties, including those of traditional religious and cultural importance. VA also consults with tribal governments on a much broader range of potential tribal concerns and issues with respect to proposed VA actions, as prescribed by Executive Order 13175, Consultation and Coordination with Indian Tribal Governments and by VA Directive 8603, Consultation and Communication with Federally-Recognized Indian Tribes.

VA sought government-to-government consultation with Native American tribes that have potential traditional, historic, or current ties to the VA BHHCS service area. A list of potentially affected tribes (federally recognized and other tribes) was compiled from VA sources and from SHPOs for South Dakota, Nebraska, and Wyoming; the U.S. Department of Housing and Urban Development

website; tribal historic preservation office directories; tribal government websites; federal agency websites related to tribal consultation; historic maps of tribal territories; and from the EIS contractor's previous experience. The VA Office of Public and Intergovernmental Affairs, by letter sent in August 2014, informed these tribal governments of the reconfiguration proposal, invited their participation in the Section 106 consultation process pertaining to historic properties, and requested their input on other issues such as access to medical care and Veterans benefits. The letter was sent to 68 representatives of 41 tribes. The letter and list of tribes to whom it was sent are included in Appendix C, NEPA/NHPA Substitution Process.

Follow-up contacts were made with the 41 tribes after the August 2014 letter was sent to gauge interest in the reconfiguration proposal and participation in the consultation process on historic properties. The follow-ups included phone calls to both tribal leadership (chairpersons, presidents, and governors) and tribal historic preservation officers (as applicable). Contact was attempted until the person was reached or a message could be left with an administrative assistant or on voicemail. Additional outreach was conducted to the tribes residing within the VA BHHCS service area and within the State of South Dakota. As a result of the additional outreach, five tribes became consulting parties (refer to Table 6-1).

The Office of Tribal Government Relations within the Office of Public and Intergovernmental Affairs and VA BHHCS hosted a government-to-government consultation meeting on the reconfiguration proposal on the Pine Ridge Reservation in South Dakota in November 2014. This meeting was part of VA's ongoing responsibilities to consult and coordinate with tribal governments per Executive Order 13175 and VA Directive 8603. Issues pertaining to historic properties or the EIS were not raised or discussed during this meeting, for which a transcript is available. This meeting was immediately followed by one open to all consulting parties, including tribes, that was focused on historic properties.

On April 07, 2016, VA BHHCS sent a formal letter to each of the 41 Tribes to notify them of the upcoming closure of the public comment period and invite their comments on the draft EIS.

## 6.4 Agency Coordination

Coordination with federal, state, or local agencies is required by certain laws such as the NHPA, *Endangered Species Act*, or *Clean Water Act*; by executive orders addressing interagency and intergovernmental coordination; and by CEQ regulations implementing NEPA that emphasize cooperative consultation among agencies. Agencies with jurisdiction by law or with special expertise with respect to any environmental issue are requested to cooperate in the NEPA process (40 CFR 1501.6). VA BHHCS has requested such agencies, including ACHP, the NPS, and SHPO, to cooperate as NHPA Section 106 consulting parties for their expertise in historic properties and cultural issues, along with the other agencies and organizations listed in Table 6-1. Participation as a consulting party did not limit their ability to participate in the public process. No other environmental issues are anticipated that would require the special expertise or jurisdiction of other agencies to cooperate in the preparation of the EIS, or provide additional coordination required by law.

Certain federal, state, and local agencies were contacted by VA BHHCS and the EIS contractor for data to use in describing baseline environmental, social, and economic conditions, and for use in assessing impacts to those conditions. Comments from agencies who reviewed the Draft EIS are



addressed in this Final EIS. Agencies that submitted comments are listed in Appendix E, Section E.4 (Index of Commenters).

Copies of the Draft EIS were sent to the following federal, state, and local agencies and officials, in addition to those that are also listed as consulting parties in Table 6-1:

Ellsworth Air Force Base  
U.S. Environmental Protection Agency, Region 8  
U.S. Fish and Wildlife Service  
U.S. Representative Kristi Noem (SD)  
U.S. Senator John Thune (SD)  
U.S. Senator Mike Rounds (SD)

Nebraska Department of Veterans Affairs  
South Dakota Department of Environment and Natural Resources  
South Dakota Department of Veterans Affairs  
South Dakota Division of Wildlife  
Wyoming Veterans Commission

Fall River Board of County Commissioners

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Scott Phillips, RPA	Cultural Resources Section 106 Integration	MA, Anthropology BA, History, Anthropology, Sociology, and Latin	15
James Steely	Cultural Resources Section 106 Integration	MS, Architectural Studies BS, History and Photojournalism	38

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## 9.0 GLOSSARY

**Aesthetic resources:** The components of the environment as perceived through the visual sense only. Aesthetic specifically refers to beauty in both form and appearance.

**Affected environment:** A portion of the NEPA document that succinctly describes the environment of the area(s) to be affected or created by the alternatives under consideration. Includes the environmental and regulatory setting of the proposed action.

**Alternative:** A reasonable way to fix the identified problem or satisfy the stated need.

**Attainment area:** An area that the Environmental Protection Agency has designated as being in compliance with one or more of the National Ambient Air Quality Standards for sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and particulate matter. An area may be in attainment for some pollutants but not for others.

**Council on Environmental Quality (CEQ):** Established by Congress within the Executive Office of the President as part of the *National Environmental Policy Act of 1969*, CEQ coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives. The Council's Chair, who is appointed by the President with the advice and consent of the Senate, serves as the principal environmental policy adviser to the President. The CEQ reports annually to the President on the state of the environment, oversees federal agency implementation of the environmental impact assessment process, and acts as a referee when agencies disagree over the adequacy of such assessments.

**Criteria pollutant:** An air pollutant that is regulated by National Ambient Air Quality Standards. Criteria pollutants include sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and two size classes of particulate matter, PM<sub>10</sub> and PM<sub>2.5</sub>. New pollutants may be added to, or removed from, the list of criteria pollutants as more information becomes available.

**Critical habitat:** Habitat essential to the conservation of an endangered or threatened species that has been designated as critical by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service following the procedures outlined in the *Endangered Species Act* and its implementing regulations.

**Cumulative effect (cumulative impact):** The impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

**Decibel (dB):** A unit for expressing the relative intensity of sounds on a logarithmic scale from zero for the average least perceptible sound to about 130 for the average level at which sound causes pain to humans. For traffic and industrial noise measurements, the A-weighted decibel (dBA), a frequency-weighted noise unit, is widely used. The A-



weighted decibel scale corresponds approximately to the frequency response of the human ear and thus correlates well with the loudness perceived by people.

Direct effects: Caused by the action and occur at the same time and place.

Ecoregion: Geographical area with similar climate and landforms, containing a variety of ecosystems characterized by its plant and animal communities and abiotic conditions, such as climate, soils, and elevation.

Effects: “Effects” and “impacts” as used in this analysis are synonymous. Effects includes ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.

Endangered species: Plants or animals that are in danger of extinction through all or a significant portion of their ranges and that have been listed as endangered by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service following the procedures outlined in the *Endangered Species Act* and its implementing regulations.

Environmental impact statement (EIS): A detailed written statement required by Section 102(2)(C) of NEPA, analyzing the environmental impacts of a proposed action, adverse effects of the project that cannot be avoided, alternative courses of action, short-term uses of the environment versus the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitment of resources.

Environmental justice: The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. Executive Order 12898 directs federal agencies to make achieving environmental justice part of their missions by identifying and addressing disproportionately high and adverse effects of agency programs, policies, and activities on minority and low-income populations.

Floodplain: The lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year.

Hazardous material: Any material that poses a threat to human health and/or the environment. Hazardous materials are typically toxic, corrosive, ignitable, explosive, or chemically reactive.

Historic property: Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the

Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

Impacts: See Effects.

Impervious surface: A hard surface area that either prevents or retards the entry of water into the soil or causes water to run off the surface in greater quantities or at an increased rate of flow. Common impervious surfaces include, but are not limited to, rooftops, walkways, patios, driveways, parking lots, storage areas, concrete or asphalt paving, and gravel roads.

Indirect effects: Caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. May include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Mitigation: Includes (a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments.

National Ambient Air Quality Standards (NAAQS): Standards defining the highest allowable levels of certain pollutants in the ambient air (i.e., the outdoor air to which the public has access). Primary standards are established to protect public health; secondary standards are established to protect public welfare (for example, visibility, crops, animals, buildings).

National Pollutant Discharge Elimination System (NPDES): A provision of the *Clean Water Act* that prohibits discharge of pollutants into waters of the United States unless a special permit is issued by the Environmental Protection Agency, a state, or, where delegated, a tribal government on an Indian reservation.

National Register of Historic Places: The nation's inventory of known historic properties that have been formally listed by the National Park Service (NPS). The National Register of Historic Places is administered by the NPS on the behalf of the Secretary of the Interior. National Register listings include districts, landscapes, sites, buildings, structures, and objects that meet the set of criteria found in 36 CFR 60.4.

No action alternative: The alternative where current conditions and trends are projected into the future without another proposed action.

Non-attainment area: An area that the Environmental Protection Agency has designated as not meeting (that is, not being in attainment of) one or more of the National Ambient Air

Quality Standards for sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and particulate matter. An area may be in attainment for some pollutants, but not for others.

Particulate matter (PM), PM<sub>10</sub>, PM<sub>2.5</sub>: Any finely divided solid or liquid material, other than uncombined (that is, pure) water. A subscript denotes the upper limit of the diameter of particles included. Thus, PM<sub>10</sub> includes only those particles equal to or less than 10 micrometers (0.0004 inch) in diameter; PM<sub>2.5</sub> includes only those particles equal to or less than 2.5 micrometers (0.0001 inch) in diameter.

Primary care: The Institute of Medicine's definition of primary care provides the foundation of VHA primary care. "Primary care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community." VHA primary care gives eligible Veterans easy access to health care professionals familiar with their needs. It provides long-term patient-provider relationships, coordinates care across a spectrum of health services, educates, and offers disease prevention programs. Primary care has become the first point of contact with the health care system for Veterans enrolled in VHA. (Source: <http://www.va.gov/health/services/primarycare/>)

Runoff: The portion of rainfall, melted snow, or irrigation water that flows across ground surface and is eventually returned to streams. Runoff can pick up pollutants from the air or the land and carry them to streams, lakes, and oceans.

Scoping: An early and open process for determining the extent and variety of issues to be addressed and for identifying the significant issues related to a proposed action (40 CFR §1501.7). The scoping process helps not only to identify significant environmental issues deserving of study, but also to deemphasize insignificant issues, narrowing the scope of the NEPA process accordingly, and for early identification of what are and what are not the real issues (40CFR §1500.5(d)). The scoping process identifies relevant issues related to a proposed action through the involvement of all potentially interested or affected parties (affected federal, state, and local agencies; recognized Indian tribes; interest groups, and other interested persons) in the environmental analysis and documentation.

Secondary care: Provided by someone with specific expertise in a condition, generally by reference from primary care physician.

Solid waste: Non-liquid, non-soluble materials ranging from municipal garbage to industrial wastes that contain complex and sometimes hazardous substances. Solid wastes also include sewage sludge, agricultural refuse, demolition wastes, and mining residues. Technically, solid waste also refers to liquids and gases in containers.

Specialty care: VHA specialty care components include: allergy and immunology, anesthesia, cardiology, chaplain Services, critical care, dermatology, diabetes and endocrinology, emergency medicine, eye care (optometry and ophthalmology), gastroenterology, infectious diseases, nephrology (kidneys), neurology, nutrition and food services,

oncology and hematology, pain management, podiatry, and rheumatology. Source:  
<http://www.medicalsurgical.va.gov/medicalsurgical/index.asp>

Tertiary care: A higher level of specialty care within a hospital, including highly specialized equipment and surgery.

Unique Veteran: A “unique Veteran” is counted as unique in each division from which they receive care. For example, if a patient receives primary care at one VA facility and specialty care from another VA facility, they will be counted as a unique patient in each.

Wetlands: Those areas that are inundated by surface water or groundwater with a frequency sufficient to support, and under normal circumstances do, or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas. Jurisdictional wetlands are those wetlands protected by the *Clean Water Act*. They must have a minimum of one positive wetland indicator from each parameter (vegetation, soil, and hydrology). The U.S. Army Corps of Engineers requires a permit to fill or dredge jurisdictional wetlands.

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